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ORIGINAL ARTICLES.

CEREBRO-SPINAL ARCHITECTURE AS A FACTOR IN THE DIAGNOSIS OF NERVOUS DISEASES.

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By virtue of his mysterious and complex nature man has attracted the attention of the brightest intellects of every department of learning from time immemorial, and this attraction is even greater to-day than ever before.

To the searcher after truth he has ever proven himself an enigma. Considered from whatever standpoint, man has furnished more riddles and problems to the square inch than any other creature we know anything about; certainly no other object has been the subject of more severe and critical analysis than he, yet to-day we are all willing to admit the fact that there is still much concerning man that is still unknown to us.

While this may all be true, nevertheless it is a very gratifying fact for us to know that each and every century has furnished a greater or less number of investigators in the various departments of medicine, whose combined labors have solved many of the more difficult problems concerning his physical nature, and rendered possible the study of man on a scientific basis.

In an impartial investigation, therefore, sound method requires that we take into consideration all the phenomena presented, each in its completeness and natural relations, and an estimate of their full value given in accordance with their relative weight and bearing on the problems at issue. By the application of such methods in the study and order of nature, we soon discover the elements of a plan or system which shows progress in the unfolding of its parts from the lower and more simple forms of life to the higher and more complex. Each department of nature is thus seen to become higher and higher through the addition to itself of something in organization and endowment which the next below it does not seem to manifest or possess, but which have definitely been demonstrated to reach the very height of its power and perfection in the human brain convolutions.

In no other department of medicine is this law of evolution more beautifully illustrated or carefully observed than that which has been found to exist in the development of the central nervous system.

The very fineness of architecture and delicacy of structure has rendered its study beyond human skill until quite a recent period, hence the true nature of its anatomy and physiology all along the ages has been very imperfectly understood. The force and gravity of this lack of knowledge is very apparent when we remember that one of the fundamental principles of medicine declares that to understand pathological we must first possess a thorough knowledge of physiological processes.

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The history of the progress of medicine also shows that just in proportion to our knowledge of the anatomy and physiology of any given part, does our knowledge of the symptomatology of its disease advance. The great aim, therefore, of scientific investigation, as Dr. Starr says, is to associate symptoms with lesions, and this has been done to a remarkable degree of late, chiefly along the lines of anatomy and physiology, through the instrumentality of the microscope.

In tracing the general outline of the history of the progress of medical science, it seems to me that it naturally divides itself into two great epochs, the first dating as far back as the days of Vesalius, the worthy founder of anatomical science in the year 1514, A. D., and the second from the introduction of the microscope into medicine by Leuwenhœck, until the present time.

These two great epochs stand out in special salience and present a marked contrast in the steepness of the rise of knowledge they present when duly compared.

In addition to this, they also represent the two great departments of study which have furnished all that is known concerning man's physical nature. These may be termed: I. *ma*croscopical; II. *mi*croscopical study. In these are included all the varied lines of scientific research; and all the various discoveries, from whatever source, belong to one or the other of these periods.

In this connection it must be remembered that the student of medicine has necessarily been forced to depend upon the different means and methods placed at his disposal by the arts and sciences of his own epoch, hence the smallest technical discovery frequently became of inestimable value. Considering the crude and limited means and methods of investigation belonging to the first epoch, the labors of such men as Vesalius, Eustachius, Fallopius, Pachioni, Harvey, Willis, Vieussens, Meckel, Scarpa, and many others whose names are immortalized in anatomical nomenclature, cannot be over-estimated and their discoveries testify as to their greatness and earnestness of purpose. Nevertheless it is the *microscopical* epoch to which our greatest advance belongs, and it is this we are compelled to recognize as furnishing the most marvellous and brilliant results, as well as the most practical knowledge. It is to certain consequences therefore, concerning this microscopical period and notably those of the past few years, that I desire to call attention at this time, consequences that seem to me to be of the utmost importance to the general practitioner, as well as to the neurologist in their daily practice.

The marvellous extent of the changes wrought cannot be realized by all the members of our profession, and for obvious reasons. Those of you who studied medicine before the change took place have been unable to follow the new development of knowledge on account of the exigencies of general practice with its ever increasing demand on your time and energies, for the successive steps have followed each other with a rapidity almost bewildering. Then again the large number of practitioners who studied medicine more recently and during the time in which these changes were in actual progress, but were yet subject to doubt, necessarily learned fragments of the new but large quantities of the old doctrines concerning the genesis of nervous diseases, thus acquiring a mixture which to-day we know to be quite incompatible and consequently harmful.

Before our present perfected knowledge, the pathology of nervous diseases was usually inferred from analogy, but to-day we know that the analogy was false and the malady itself quite different from that which was then supposed to exist. The vast increase of our knowledge of the anatomy and physiology of the nervous system, which is so salient a feature of recent progress, and the application of this to disease, has been found to be most useful in the correction of such erroneous inference and the displacement of the work of fancy by ascertained positive fact.

By it also our nomenclature has been greatly enlarged, our classification of diseases wonderfully improved and modified and our means and methods of diagnosis thereby rendered more perfect and reliable.

The application of the perfected microscope to pathology immediately increased the range of so-called organic diseases. The term organic being used to designate those diseases in which the lesion is visible and, as visibility is only a relative term depending on the means of vision, it is easy to understand the great changes which have been wrought in this department alone. For instance, prior to the discovery of Turck ("That a break in the conductivity of certain nerve fibres in the spinal cord always led to a degenerative process which spread upwards or downwards according to its seat") our knowledge of the pathology of spinal diseases was very imperfect, hence a correct diagnosis was impossible; but the application of this fact and its further elaboration furnished us with that most valuable pathological classification of diseases of the spinal cord into systemic and non-systemic diseases.

In view of all the remarkable advances which have been made of late in this department of medicine, is it any wonder that those only familiar with the old, should be lost in the mazes of the new? All important, therefore, is the knowledge which recent investigation affords concerning cerebro-spinal architecture and its use as a factor in the diagnosis of nervous diseases.

The wonderful perfection which has been attained of late in elucidating the complex mechanism of the nervous system may be said to largely depend upon three methods of research, viz., I. The degenerative method discovered by Turck, in 1850; II. The atrophic method of Von Gudden, in 1870; III. The developmental method of Flechsig, in 1877.

It was the further elaboration of these that gave us the present perfected knowledge of cerebro-spinal architecture, and rendered it most valuable as an aid in diagnosis. In their utilization, the most remarkable results have been accomplished, and still in process of enlargement.

It would be impossible for me to give in detail the structure and functions of all the various parts which constitute cerebro-spinal architecture, so that at best I can give but a hurried glance of some of the more important, yet I will endeavor to review briefly some of the principal facts as demonstrated by the more modern researches in America, England, France and Germany, and those which are now generally conceded and accepted as proven.

The department of medicine that relates to neurology is based on physiological principles, and recognizes the nervous system, with its various appendages and correlating energies, to be the supreme controlling force in man. Its functions taken collectively, associate the different parts of the body in such a manner that a stimulus applied to one organ excites to action another. It is composed of a series of connected central organs called collectively: I. the cerebro-spinal centre, or axis; II. ganglia; III. nerves; IV. certain modifications of the peripheral terminations of nerves which form the organs of the external senses.

It is divided into two great systems, I. Cerebro-Spinal; II. Sympathetic.

The first includes the brain, spinal cord, cranial nerves, spinal nerves, and is in direct connection with the cerebral centers.

The sympathetic is not in direct connection with the cerebral centers, but is so indirectly, by means of numerous branches which go to and come from it. It essentially consists of a double chain of ganglia.

The spinal cord is a long rod or mass of nervous tissue, enclosed in a bony canal formed by the bones of the spine. It consists of white and gray nervous tissue, the white being most external and capable of division into various tracts or columns, which are connected centrally with the brain. It gives off at regular intervals the spinal nerves in successive series, which are distributed to the various muscles.

The white substance is made up of at least nine tracts of fibres which differ in function according to its situation. It is usually divided into three primary columns, viz: (*a*) anterior; (*b*) lateral, and (*c*) posterior. (*a*) The anterior is motor in function; (*b*) the lateral column is much more complicated and has a mixed function containing both motor and sensory fibres.

(*c*) The posterior columns of the cord present two well defined tracts known as the column of Goll and column of Burdach, and these are said to be essentially sensory in function. Now the study of the course and distribution of these different tracts and their special uses constitute one of the most difficult problems in neurology, for it is by these that impressions from without are conveyed to the brain and transformed into other impulses. One of them is said to convey the sensations of pain, another those of touch, a third varying degrees of temperature, a fourth that of muscular sense; while still others represent the so-called motor tract, which for the most part crosses at the medulla, while certain fibres, known as the column of Turck, ascend to the brain on the same side.

The gray matter of the spinal cord is made up of several distinct groups of cells which are said to be the residence of special centers which govern different functions of the body, the principal ones being that of reflex action, trophic and nutritive powers, as well as the source of innervation of the sympathetic system.

As the gross anatomical features of the brain are already familiar to you, I shall merely refer to them incidentally, but speak more especially of these parts the knowledge of which, in my judgment, is more requisite in the diagnosis of nervous diseases.

The brain consists of a variety of nerve centers arranged in layers or masses, connected with each other as well as the spinal cord and other organs by means of various tracts of nerve fibres which differ in function and structure. The most external layer consists of gray matter and constitutes the cerebral cortex.

Now the cortex of the brain is the seat of all conscious mental action. It is therefore the receptacle of all impressions made upon the organs of sight, hearing, touch, taste and smell. Here and here only do such impressions become transformed into conscious appreciation of external objects. From it also proceed all the motor fibres distributed to the voluntary muscles, under the name of the motor tract, as well as the sensory fibres which gives rise to psychical perception of external impressions.

Now certain portions or areas of this cerebral cortex preside over different distinct functions or actions of the body; indeed it may truly be said that every part of the body is represented in it. As Dr. Ramsey well says: " By facts at our command to-day we know that one portion is limited to vital processes, hence its destruction causes instant death;" another part presides over the various movements of the body, hence paralysis of motion results from injuries to this area; a third enables us to appreciate the sense of touch, another of pain, another of temperature, and disturbances of these functions will be apparent when these regions are diseased. Another portion presides over the sense of sight, hence disturbances of vision, or even blindness, may follow injury or disease of this part. In the same manner hearing and smelling are governed, and when a combined action of all these parts are demanded, as in the exercise of reason, will, or self control, the knowledge gained by these means can be contrasted, and their specific functions correlated in such a manner as to meet the exigency of the case."

From this, then, we learn that the external surface of the brain can be mapped out into a series of definite areas or regions, and say positively that this or that one controls or presides over this or that particular function of the body. By a thorough knowledge of these special areas, the skilled physician can determine by the symptoms which their derangement produces, the exact situation, extent and nature of the lesion.

So positive, gentlemen, is the information thus afforded to-day, that surgical operations are now performed daily for their relief, whereas a few years ago such a proceeding was considered impossible.

I will now endeavor to demonstrate the various areas or regions referred to, together with their special functions. For convenience I have divided the brain into four parts, or lobes, viz.: I. Frontal; II. Parietal; III. Occipital; IV. Temporal. The names, as you will observe, correspond to the names of the bones of the skull which encase them. They are separated from each other by three important fissures, viz.: I. Sylvius; II. Rolando; III. Parieto-Occipito.

I.—FRONTAL LOBE.

The first frontal lobe represents four principal convolutions which are separated by fissures, the largest one being termed the precentral, and divides this region into two parts, an anterior and posterior.

That part which lies in front consists of three convolutions, first, second and third frontal; it is sometimes termed the prefrontal lobe. In these are supposed to reside the centers which control the higher mental faculties such as judgement, reason, will, self-control, etc. Any injury to this part is liable to cause a disturbance of these faculties. At the lower portion of the third frontal reside the centers which Broca long ago designated as the speech area, or the seat of language. Injury or destruction of this may cause an impairment of speech, or even complete Aphasia.

The posterior portion of the frontal lobe constitutes a part of the motor area, and is known as the ascending frontal.

II.—PARIETAL LOBE.

This lobe is also made up of four principal convolutions named, Ascending Parietal, Superior Parietal, Supra-Marginal, and Angular. These are separated from each other by small fissures, and divided into two portions by a larger fissure termed the fissure of Rolando. This is the important landmark for all surgical operations in and around the motor area.

That portion situated in front of the fissure, together with the ascending frontal and a portion of the superior parietal termed the Paracentral lobule, constitutes the whole of the motor area. In this resides all the centers which govern the voluntary movements of the body. For convenience it may be divided into three parts: An (*a*) upper, (*b*) middle, (*c*) lower. The first governs the movements of the legs; the middle, the arms; the lower, the lips and tongue. Any injury to these may cause corresponding paralysis to the parts supplied. The remaining portion of the parietal lobe not specially belonging to the motor area, and separated from it posteriorily by a large fissure termed the intraparietal, represents the regions which are probably the seat of conscious perceptions of touch, pain and temperature, and consequently may be styled a sensory area.

III.—THE OCCIPITAL LOBE.

The occipital lobe is made up of three convolutions which preside over the sense of sight, and the recognition of familiar objects by the eyes depends entirely upon the integrity and activity of the cells of this portion of the brain. Any injury to this may cause disturbance of vision and destruction of the cuneus may produce blindness.

IV.—TEMPORAL LOBE.

Finally, the temporal lobe is the region or seat of the centers which enable us to consciously appreciate sounds, odors or taste, hence it represents the centers of the special senses of hearing, smelling and taste. Like the occipital, it is composed of three convolutions separated from each other by small fissures.

All these various centers are thus seen to have their residence in the cerebral cortex. This cortex forms a vault or dome arching the large mass of white substance beneath and known technically as the centrum ovale.

Proceeding in every direction from these centers are the nerve fibres which converge from all parts of the cortex to form the corona radiata and centrum ovale. Starr says that these fibres may be arranged in three sets, viz.: I. Association fibres which connect the cells of different areas in the same hemisphere.

II. Commisural fibres which connect homologous parts of the opposite hemispheres and therefore cross the median line.

III. The projection or peduncular fibres which connect the different areas of the cortex with other parts of the nervous system lying below it. They converge from all parts of the cortex and gathering together at the upper level of the basal ganglia either terminate in the optic thalamus or pass between the basal ganglia to other parts of the brain and spinal cord. The fibres terminating in the optic thalamus constitute the visual and auditory tracts, while the rest of the fibres pass on at once to the internal capsule where they form a series of different tracts with special functions. From before backwards they are as follows:

I. The speech tract, conveying speech impulses to the pons and medulla.

II. The face tract, conveying facial motor impulses to the pons where the nucleus of the seventh nerve resides.

III. The arm tract, destined to the arm center in the cord.

IV. The leg tract, transmitting leg impulses to the leg centers in the cord.

V. The fibres conveying impulses to the muscles of the trunk.

Hence, it appears that the centers for the legs, which are highest in the cortex, become lowest in the capsule, while the face fibres, which are lowest in the cortex, become highest in the capsule; but the arm fibres are situated between the two at the cortex as well as the capsule.

These various tracts of fibres constitute the motor tract whose course through the anterior two-thirds of the posterior portion of the internal capsule is probably familiar to all of you, and from this point passing to form the middle third of the crus cerebri or pes peduncle, thence to the pons where the facial fibres decussate to opposite sides to end in their respective nuclei, while the balance of the fibres are continued by way of the pyramids of the medulla, where they for the most part decussate to form the crossed pyramidal tract of the cord while a few are continued down the cord, on the same side as far as the mid-dorsal region, under the name of the column of Turck. All of these fibres which are continued from the brain to the spinal cord terminate in the large cells found in the anterior cornua of the gray matter where they again take origin to be distributed to the voluntary muscles of the body. Besides the motor set of projection fibres there is still another set known as the sensory tract. It lies just posterior to the motor tract and passes inwards into the parietal convolutions to the capsule, where, in general terms, it may be said to take a similar course to that of the motor. It is made up of fibres which convey the sensations of touch, pain, temperature and muscular sense; hence any lesion in any part of its course causes corresponding disturbances of those functions.

Thus the fibres which constitute the internal capsule possess, as Dr. Ranney says, greater interest than many others, both from a physiological as well an anatomical standpoint.

Late researches have shown that it contains a successive series of tracts or bundles, the functions of some of which are definitely known while others are not yet well determined. Taken collectively they may be arranged as follows:

1. That part of the internal capsule designated as the caudo lenticular portion, which lies anterior to the knee, is composed of fibres whose functions are imperfectly understood. They seem, however, to pass chiefly to the cortex of the frontal lobes and thus they would appear to be associated with the higher mental faculties.

2 The functions of the majority of the tracts of fibres, however, found in the thalamus and lenticular portion of the internal capsule are definitely known and serve as valuable clinical guides to the localization of cerebral lesions which directly involve or create pressure upon them. They are as follows:

A. In the region of the knee are found the motor fibres of the face. These facial tract fibres decussate to opposite sides in the middle of the pons variolii terminating in their nuclei.

B. Posterior to this we have the pyramidal motor tract or the will tract of Spitzka, those destined for the arm centers in the cord lying anterior to those destined for the leg. These control the voluntary muscles or movements of the limbs.

C. Posterior to this we have the sensory tract which convey sensations of all kinds from the peripheral organs to the cells of the cerebral cortex where they can be appreciated by consciousness.

D. Next in order is the speech tract, whose fibres allow of communication between the speech area of the cortex and nuclei of origin of the facial, glosso-pharyngeal, pneumogastric, spinal accessory and hypoglossal cranial nerves.

This center is also connected by association fibres with the centers of hearing, viz: the first temporal convolution, and those of sight, viz.: the occipital convolutions. Thus the cortical center of co-ordinated speech movements is capable of receiving excitation from the center of hearing when replies to spoken language are demanded, and from the centers of sight when written or printed language calls for a verbal reply. It is also put in communication, as we have already seen, with the nerves which preside over the apparatus of speech.

E. The optic fibres pass through the extreme posterior part of the capsule. These are designed to join the optic nerves with the convolutions of the occipital lobes. This constitutes the visual tract.

F. Another tract in the capsule is the hypo-glossal tract. This is an independent tract of fibres which connects the cortical centers for the movements of the tongue with the nucleus of origin to the twelfth cranial nerve within the medulla. It therefore probably joins the lower third of the pre-central or ascending frontal convolution with this nerve. It is supposed to pass through the internal capsule near its knee, and anterior to the motor fibres which govern the limbs. Lesions of this tract would produce symptoms allied to those of Duchennes disease, viz.: Bulbar, or glosso-labio-pharyngeal paralysis.

G. The course of the fibres associated with the rest of the special senses, viz.: those of taste and smell, are not yet so well understood as in the case with the eye and ear. This latter, or auditory tract, probably passes through the lower and posterior part of the internal capsule to its respective centers in the temporo-Sphenoidal lobe.

From the course of the various cerebral tracts, we learn that any lesion which lies in the centrum ovalle at any point posterior to the pre-central suclus of the frontal lobe must necessarily either effect the motor, sensory, visual or auditory tracts, or individual fibres of these, and the symptoms of their derangement will necessarily correspond to the parts affected. Bearing also in mind the following rule of lesions confined to the motor area that the nearer the lesion is to the cortex the more liable will only one center be affected; hence monoplegic paralysis usually results. While the nearer the lesion is to the capsule the more liable two or more tracts are to be affected; hence hemiplegic paralysis together with hemianæsthesia usually occurs.

The importance of this knowledge cannot be over estimated, as by this we are enabled to decide upon the possibility of relief by surgical interference, as well as to define the special nature and seat of the lesion. While it must be confessed that the study is very tedious and complicated, yet the conclusions to be reached are of the highest importance to the patient as well as physician.

As the various facts embodied in this paper are scattered at intervals throughout the wide domain of medical literature and therefore not easy of access to all, I have endeavored to collect and present them in as tangible a form as possible, trusting they may prove of service to any who may be called upon to treat the more obscure diseases of the brain and spinal cord. I might also add that in the preparation of this paper I have made free use of the opinions and statements of such authors as Spitzka, Ferrier, Hughlings Jackson, Horsley, Gowers, Charcot, Nothnagle, Edinger, Ranney, Luys, Flechsig, Gray, Sachs, Starr, and Dana, as well as many others, besides the cullings from the numerous periodicals devoted exclusively to neurological science.

COMMUNICATIONS.

BACTERIOLOGY AND COUNTRY HYGIENE.*

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In these, the closing years of the Nineteenth Century, scientific research is being carried on with a zeal and an enthusiasm unknown to any other age. Men are becoming more unselfish and self-sacrificing in their pursuit of knowledge, are giving their time and their fortunes and devoting their very lives to the attainment thereof. In every science, the devotees are carrying their investigations deeper and deeper, and the wonderful scientific mysteries unfolding in response to their endeavors only seem to whet the appetite and increase the unsatiable desire for further knowledge. As a result of this untiring work, wonderful progress is being made in every science and, the best of it all is, this knowledge obtained is being used for the elevation, the advancement and the comfort of the human race.

In this movement, the science of medicine does not lag behind. In no other field is there greater display of earnestness, zeal, pluck and determination and in none other are there more brilliant and at the same time more practically beneficial results. In no other profession, without any exception, has there been manifested more modesty, unselfishness and self-sacrifice, more of that greatest of all virtues, charity, or love of fellowman, and in none other has there been more ardent, disinterested work done or more heroism shown in attempting to relieve suffering humanity and no other more deserves the admiration and the gratitude of the whole world.

Every true physician must feel an added heart beat of pride in his profession when he contemplates these things.

That branch of medical investigation which has been given the most attention, which has already made the greatest change in our therapeutics and which bids fair to well-nigh revolutionize our ideas about many diseases and their treatment, is the study of bacteriology. A few years ago it was given only a passing thought and spoken of (if spoken of at all) only indifferently or contemptuously; but today these little parasites are taking quite a prominent position in the medical world. The most distinguished investigators are fairly living among them, cultivating them, studying their nature, their appearance, their habits, their products and the effect of themselves and their products when introduced into the system; the most progressive medical schools are adding special laboratories for the study of them, medical lectures and essays are replete with them and the medical journals are full of them. Now, the outside world is catching on and the newspapers are giving space to them and even the patent medicine advertiser has a knowledge of their existence and is trying to turn them to a profit by promises of a complete, sure and universal destruction to them.

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*Presidential Address, delivered before the Maury County, Tenn., Medical Society.

These innumerable little pests float in the air we breathe, in the water we drink, live in the food we eat, hide themselves in the carpets, on the walls, and in every crack, nook and corner of the houses in which we live, and so great is their tenacity to life that they live on for months and years, resisting heat and cold and almost every effort we make for their destruction, even daring sometimes to take up their abode with impunity in some of our boasted disinfectants and multiply and develop there.

They are continually and persistently seeking an entrance into the body that they may find a congenial soil and set up their destructive process there. Having once forced their unwelcome entrance into the body and found a suitable place upon which to plant their batteries and establish their head-quarters, they put their chemical laboratory to work and manufacture poisoned ammunition with which to carry on effectively their fierce assault upon every vital fortress. They send these destructive products into the brain, the heart, the digestive organs and each shows the disturbing effects of their presence and each trembles, weakens and well-nigh succumbs to the unwonted invasion.

But nature does not tamely submit to this intrusion upon her domain and the bacteria do not find an unmolested march or an unresisting or easily conquered inhabitant. For within the body are found living cells, or phagocytes, which stand ever on guard, keeping up a close and ceaseless vigil, ever ready and waiting to rush to the rescue and repel the advance of any destructive army. Hence, we have an uncompromising warfare between cells and parasites, between native inhabitants and foreign invaders. As the bacteria exert their destructive influence chiefly through the agency of chemical poisons, so likewise the living cells use their counteracting poisons as a means to destroy them and render inert their products. This contest is one that knows no truce. Each side carries the black flag and it is a war of extermination and so fierce do the combatants become that the conquerors even devour the dead bodies of their adversaries.

While this savage interchange of hostilities is going on and this furious battle raging, all is noise, strife and confusion within the system. But when the victory (as, fortuately, it usually does), perches upon the banner of the living cell, and the smoke of battle has cleared away, we find that every evidence of the ferocious contest has been removed and all is peace, quiet, order and regularity. Once more, not only this, but the industrious little cells often go further and so fortify the system that forever thereafter they can easily protect themselves from the future assaults of these same bacteria and give the body an immunity from them.

So nobly, so brilliantly and effectively do these little cells do their part, and so many valuable lessons have they taught the close and wondering observer, that the admiring physician looking on feels like bowing in humble respect before them and deems it an honor to be an ally to such courageous heroes and a coveted privilege to be a disciple of such judicious teachers.

This so-called doctrine of Phagocytosis is an interesting and fascinating one, and while many will call it only a beautiful theory, it has already added something to our therapeutic resources and promises much more for the future.

But while the study of bacteriology has added much to our knowledge of the etiology and pathology of diseases and has aided us materially in the rational treatment thereof, perhaps the greatest benefit we have derived from it and the greatest advancement that has been made is in that art which is the perfection of all medical skill, viz.: the prevention of disease. Knowing these little germs to be the cause of so many of the ills which flesh is heir to, there is nothing more natural than that the greatest effort should be made to prevent their entrance into the body.

Now, the first thing we notice in studying bacteria, is that dirt and filth are the most congenial soil for their propagation and development; hence that most important of all hygienic laws, always appreciated, but now that we understand the habits of these parasites, more so than ever before, that cleanliness is absolutely essential to health and that filth is the most prolific cause of disease. The cities and larger towns have long since learned, by sad experience, the fatal results of neglecting this, as well as other hygienic laws, and have conformed their laws and customs accordingly. They locate and build their houses with due regard to drainage, ventilation, sewerage, etc., so that they can have pure, fresh air to breathe; they arrange their water-works so that they can have good, clean water to drink; have boards of inspectors to see that they have wholesome food to eat, and most important of all, they give their boards of health power to compel every man to clean up his premises, disinfect privy vaults and cess-pools, and to see that nothing is allowed to be carried on or to remain on one's premises which would be a nuisance or source of danger to the health of his neighbors. The result of this is that we have cleaner cities, with better health reports and a constantly decreasing rate of mortality and an almost complete suppression of the former fatal and dreaded epidemics. Where so many people are crowded together, the necessity for such precautions forces itself upon the attention of people and in pure self-defense they *must* not neglect them.

But, while this improvement has been going on in the cities, what has been done in the smaller towns and country? Nature is exceedingly kind to the country inhabitants. She furnishes them with fresher air and purer water, if not polluted by man himself, than the cities can obtain with all their improved appliances, and the people have become so accustomed to think of the country as the place for city people to go for health, and they have neglected the best known laws of hygiene for so long, with comparatively few bad results, that they never think of such things until sickness and death comes and they begin to look around for a cause thereof. I wish to direct your attention for a very few moments to some of the very noticeable conditions frequently found in reference to country hygiene. First, we will notice the water supply. Sometimes we find several members of a family stricken with a fever, generally typhoid, at the same time, and, in looking for a cause, we will investigate the water supply of such a family. We will generally find an old well, which probably has not been cleaned out for years, located in the lowest part of the premises, so that all the filth about the yard and (perhaps) lot must necessarily drain right into it. Or, you will find a spring down in the stock lot, with horses, cattle, hogs and geese running all around it and the spring branch choked up with grass or leaves. I recall one of this kind. In the family of the owner of the place I had five cases of typhoid fever following each other in quick succession, and in the house of a tenant, who used water out of it, I had three or four cases, while among the pupils of a school, who got their water at the same place, I had several cases of both typhoid and malarial fevers. Of course, my attention was immediately directed to this spring. I found it located about thirty yards from the house, at the foot of a little hill, upon which was situated the residence with all the out-houses (a condition often found), the branch from it choked up with half-decaying weeds and grass, so that the stream could only make its way sluggishly and laboriously away. And, just above this spring, I found a large hog-wallow, separated from the spring by a mound apparently thrown up for the purpose, about twenty feet through, and a muddy, slimmy stream from this flowed right down by the fountain of the spring and emptied itself into the branch just a few feet below. It was not only not surprising that they had typhoid and malarial fevers as results, but a wonder that they did not have the whole catalogue of diseases besides. This is probably an extreme case, but if we will examine the wells and springs from which the majority of even the well-to-do people get water, we will find that that water must certainly be far from being pure and could be wonderfully improved by just a little ditching, a little more attention and by showing a little better judgment in locating the buildings, stock-lots, etc., with reference to the source of water supply. I wish to put especial stress upon this point, for I believe it is most sadly neglected in the country and a most prolific source of sickness, suffering and even death.

Now, when we come to notice the houses in which the people live, according to my observation, very little fault can be found with the dwellings of the well-to-do which have been built lately. They usually select healthy locations for them, and the rooms are generally large and well ventilated. One error that ought to be condemned is that not uncommon one of having cellars under the houses, which are used for storing potatoes or other vegetables in, or for milk houses, and many of which get very damp, having water standing in them at times, and which it is not possible to properly clean out. Going to the rooms of the upper story, another improvement that might be suggested is that they be given more height, as they are generally used for sleeping rooms. We ought also to always protest against the common practice of the whole family sleeping in one room. When we come to look at the outhouses, we frequently find the stables and privy in uncomfortable proximity to the dwelling house, and one very grievous error is the almost universal neglect of using disinfectants of any kind about the premises. Where people live some distance apart, the necessity for this is not felt, but disinfectants are cheap and many cases of sickness might be prevented by their systematic use.

But when we visit the houses of the great mass of tenants upon the farms in our country, we find everything to condemn. They are frequently located close to a branch or creek, in the lowest, wettest place about the whole farm. Almost all of them are built of logs, generally old rotten logs which have already served out their term of usefulness in other houses. These furnish an inviting lodging place for every species of germ. The floors of these cabins are laid right on, or very close to, the ground; the sleepers, if there are any, have usually decayed from the constant damp, and the floor is sunken and uneven. The celling is so low that one can scarcely stand erect in the room. The doorway is low and narrow, and usually (but not always) we will find a little square hole left in the wall somewhere, which serves to let in light and air in the stead of a window.

But it is not necessary for me to continue the description of these houses, for they are so common all over this country, being found upon the farms of our most prosperous farmers, that every physician is perfectly familiar with them and will agree with me that the picture is not overdrawn. In this so-called house, consisting of one room, with perhaps a covered pen behind it for cooking purposes, must live a whole family, oftentimes doing their cooking, eating and sleeping all in the same room, and if any are sick they must remain in the room where this is carried on. As the great majority of these tenants are negroes, who are certainly not noted for neatness, you will readily see what the condition of affairs is and imagine what the results will be. Such seeds sown will inevitably bring forth a harvest of disease and death. Now by sickness the owner of the farm frequently loses the labor of his hired man or tenant for days and weeks when such service can illy be spared, or by death loses him altogether, and it seems to me that not only for humanity's sake, but as a pure matter of business and as a paying investment, they should set fire to; or tear down, these old death traps and build for their tenants larger, more healthy and more comfortable houses.

There are many other means by which the simplest laws of health are most flagrantly violated throughout the country that might be mentioned with interest, especially in reference to school houses and other public buildings, but they are patent to every observing physician and every one duly appreciates the evil thereof.

The question that presents itself to us is, what can be done to mitigate such evils? The inhabitants of this free country are a liberty-loving people, and every man feels that even if he has a condition of affairs upon his premises which brings sickness to his family or tenants, but does not harm his neighbor, it is nobody's business but his; he quickly resents any interference in the matter, and it is useless to try to make and enforce laws to compel him to change these things. But the greater number of our farmers are intelligent, reasonable people, and they would very willingly keep their premises in better hygienic condition if their attention was only directed to the evil of neglecting to do so. But how little attention has been paid to this, even by the physician himself. We see statistical reports from the cities, showing the death-rate and the number of infectious diseases, and we see the causes of these diseases discussed often and persistently in the medical and daily papers, and we see articles from the health officer, making a demand upon the people to attend to the removal of all conditions favorable to the dissemination of disease. But country people seldom ever think of these things at all in connection with their homes. Now wouldn't it be an interesting thing to country physicians if we could get at like statistics concerning the country neighborhoods? And could'nt we, by a little work, make the report of the county health officers less vague and more valuable? Suppose we appoint a statistician, and let each physician report to him the number of deaths, of infectious diseases, calling especial attention to those that are due to improper hygienic surroundings. Let the statistician tabulate and arrange these reports, publish them with appropriate remarks each month, and call the attention of the people to the preventable causes of disease, and urge them to clean up their premises, look after their springs, disinfect privies, etc., just as city health officers do from time to time. It would certainly be a wonderful improvement upon the present manner in which indefinite reports come to the health officer, from which he makes his report, and would add much to the accuracy, interest and true value of such report, both to the physician and the people.

DISPUTED POINTS IN HYSTERECTOMY.*

JOSEPH PRICE, A.M., M.D., Philadelphia, Pa.

The mooted questions in surgery grow less as our experiences enlarge and ripen. There are in our science and art some certainties, some points upon which there is unanimity of enlightened opinion. There are, however, also, as in all other sciences and arts, as in all other lines of human enterprise and endeavor, disputed points; disputed, we must take it, from the standpoint of conscientious opinion. These differences are the chief factors, the motor forces of our advances. Without them, inertia would take the place of our activities. The fact of our advances is not disputed; the lines along which they have been made, direct the way of interesting and instructive study. We have a profound interest in the names and work of those toiling pioneers who have blazed the trees for our guidance to lessen the difficulties of our following. What they have done for womankind will always lie beyond the power of biographical pen to narrate. We would find it difficult to distribute our debt of obligation when we come to consider the great labors, the brilliant work of McDowell, Kimball, and the Atlees, of Péan, Keith, Koeberle, Hegar, Billroth, Kaltenbach, Kleeberg, Schroeder, Lawson Tait, Bantock, Thornton, and others. We find stimulus in such names and such records for worthy following. They have given us the sublime lessons of their experience. What masters they are—all of them! They represent the genius of science, of practical skill; they have enlarged our resources; they have helped us to make many lives worth living. Some of these men are living to-day, are yet giants at the wheels, yet students in the solution of great surgical problems.

In considering the definitions of hysterectomy we must bear in mind nomenclature. Schroeder's term, myomotomy, is not synonymous with hysterectomy; is not hysterectomy; it more appropriately applies to simple extirpation of the tumor. Hysterectomy is the removal (Kimball's operation) of the whole body, or any section of the uterus, with tumors inseparable therefrom. Such high authority as Thornton places within its field all cases in which the uterine cavity is laid open and more or less of its wall removed along with the fibroid; whether one or both ovaries are also removed is a matter of no consequence. Sometimes it is more convenient to remove one or both, applying the term vaginal hysterectomy to cases in which fibroids, the uterus, and the uterine appendages are all removed.

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*Read before the Philadelphia County Medical Society, April 12th, 1893.

The progress made in perfecting the operation has taken some disputed points out of the field. Experience has given something of definiteness to our views; still there are two camps. The disputed points involve methods, rather than questions, of the justifiability or safety of the operation; on these points there is unanimity of sentiment among experienced surgeons. There may be yet some division of opinion as to what cases should be operated on, and what cases should be let alone. The operation was long regarded as one of the most fatal in surgery. The low rate to which the mortality following the operation has been reduced, where the cases fall into experienced and skilful hands, has given it an abiding and important place among the life-saving procedures. In the matter of methods, men are likely to credit those methods with being best which, by their own tests and in their own individual and professional experience, have given the best results. One or more failures with any one particular method of procedure drives some men to try others. With their first success they christen the baby "My method," "My modification," "My improvement," or "My invention," and the entire profession is exceedingly glad that a new genius has been born into the profession—that there is a new light in Israel.

The history of the treatment of the pedicle in ovariotomy has influenced all of the older ovariotomists to try the same methods and materials to perfect an intra-peritoneal method in hysterectomy. The early efforts of Schroeder were quite successful. Some of the younger operators have improved the statistics by clean extirpation, but we yet remain in two camps as to the management of the pedicle.

Operators clinging to the nœud and the extra-peritoneal method are making the best showing, operating right along with a very low mortality. It cannot be inferred from the success of the intra-peritoneal method in ovariotomy that improved or equally successful results will be attainable by the intra-peritoneal method in supra-vaginal hysterectomy. The results in many large and ripe experiences establish the fallacy of this idea; such inference is in blind disregard of essentially different conditions. Ligatures cannot be safely used in uterine, fibroid, or myomatous tissue. Silk, as applied to the pedicle in cystomas, is harmless and safe.

I would say here that the earlier errors in diagnosis, mistaking cystiform degeneration, fibroids, or œdematous myomas, for ovarian cystoma were common, and the cases were either abandoned or incomplete operations done with disastrous results. Some of the most skilful operators did not escape making these errors.

The treatment of the pedicle has been repeatedly and exhaustively discussed. Results have dampened the enthusiasm of the advocates of the intra-peritoneal method.

It is necessary in the removal of about all fibroids to make a pedicle. Its manufacture in extra-peritoneal hysterectomy is the one important feature of the operation. It should be made small. Suturing securely against hemorrhage is also the important feature in the intra-peritoneal, and the avoidance of hemorrhage and the ureters are the important features in the extirpation method.

Shock is minimized in the extra-peritoneal method, the operation being shorter, exposure and manipulation less, than in any of the intra-peritoneal methods.

The method of turning the pedicle into the vagina is a tedious operation; the risks of hemorrhage and of injury to the ureters is even greater than that of a clean extirpation of the cervix.

The question is often asked, "Why leave the cervix or stump in at all; it is the most common source of hemorrhage and sepsis in all the intra-peritoneal methods?" Its removal is the perfected operation, but the results as yet have not been as good as in the extra-peritoneal method of treating the stump.

Hemorrhage is incident to the supra-vaginal, as it is to all the methods. The bleeding varies greatly, and sometimes is absent altogether. In this procedure the elastic ligature (Kleeberg's) and the wire ligature minimize the risks of hemorrhage.

The chief danger in the intra-peritoneal method is bleeding from the pedicle. Drainage, or the dry treatment, where adhesions have been extensive, is of vital importance in these operations. It is an important object to get and keep the stump dry. In some cases you need not change the dressings for a week or more. They should be changed when they become moist. The advantage should be kept in mind of sewing the edges of the peritoneum across the stump, thus preventing retraction when the loop has become somewhat loose from the shrinkage of tissue. The duration of the operation is one of the many factors to be considered. There should be that rapidity consistent with due caution and scrupulous attention to essentials. There is no time for fussiness. There is the shock of the anæsthetic. Extensive adhesions, bowel and bladder complications, require painstaking surgery, and tedious and slow the steps of the procedure, and somewhat lengthy, however deft and educated the hands engaged. Temperature is an important consideration. Supplying dry heat throughout the operation will avoid, to a very great extent, the shock due to the chill of the atmosphere. In the matter of shock, long exposure and long anæsthesia count for much. It should be kept in mind, however, that to deal with an abdominal wound carelessly or too hurriedly is bad surgery. Every step should be timed to the needs of the case, every motion those of a master workman, and there should be summoned into service every resource of our science and art.

When we come to consider hysterectomy in all its phases, the condition of the patients when they come into our hands, the dire extremity that drives them to us, that they come to us with general health broken down, often complete physical wrecks, and familiar as we are with resultant issues—we have no difficulty in appreciating the difficulties we have to encounter. The professional responsibility is a heavy one. The patient's condition suggests the urgent question: "What should be done?"

We appreciate the truth of J. Knowsley Thornton's statements, we accept them in the main as surgical truths, into the acceptance and practice of which the profession should be educated. As to the relative value of two very diffierent surgical procedures for the cure of fibroid enlargements of the uterus, he says: "I feel that I am confronting one of the most difficult questions in abdominal surgery armed with imperfect weapons. Medicine has long and vainly endeavored to deal satisfactorily with this disease, and now the surgeon's aid is invoked. I do not deny that many cases have been relieved by medical treatment, and that some have been cured while under such treatment. I do think, however, that it is an open question how many of the cases cured while under treatment were cured by the treatment, and I believe the majority of such cases have been due to the co-incident interposition of Dame Nature.

"A very large number of patients never suffer pain, or even inconvenience enough to make them consult either physician or surgeon. But admitting all this, there undoubtedly remain a large number of cases urgently demanding surgical aid. Some patients are brought face to face with death from hemorrhage, excessive growth of the morbid elements, or constant interference with rest from pain and discomfort. Others are gradually but surely reduced in strength, and have lesions of vital organs as the result of constant pressure and displacement. When surgical treatment is spoken of, we are told that we have no right to interfere with fibroids as we do with ovarian tumors, because the latter surely kill if left alone and the former do not. I am certain that this argument is only partly true, and everyone who sees a large number of cases will bear me out in the statement that numbers of women die every year from the direct and indirect effects of fibroid enlargements of the uterus.

"I would ask, How much of the general surgery of the day which is dangerous to life would continue if surgeons ceased to perform operations of expedience, that is, to operate for deformities and diseases which do not endanger life in themselves, though they deprive their victims of all the pleasures of life? I affirm, then, that there are many cases of fibroid enlargement of the uterus which endanger the lives of their bearers, and that there are many more which make these poor suffering women so miserable and useless that they are justified in running the risks of operation, and that the surgeon is justified in operating. We must remember that these operations are usually undertaken in extreme cases, and when the patients are worn out with disease and suffering.

"The operation of complete supra-vaginal hysterectomy, with removal of both ovaries, has become, when properly performed, one of the most successful of the great operations.

"Hegar and Kaltenbach, by their new extra-peritoneal method, have saved eleven cases out of twelve, and the surgeons at the Samaritan Hospital have in the last year had equally successful results, also by the extra-peritoneal method, using Kœberle's wire serre-nœud in much the same way that Hegar uses the elastic ligature. These operations of hysterectomy and complete supra-vaginal hysterectomy still remain, however, very formidable operations. They are terrible mutilations; the patients are slow in convalescence. Is there then no operation of less danger, of quicker convalescence, and of better and more perfect results which we, as surgeons, can recommend to our patients.

"Thanks to American surgery, the brilliant conception of Blundell, in 1823, was made a recognized surgical procedure by Battey, in 1874, and from the labors of Hegar, Trenholm, Tait, Savage, and others, I am able to present to you a perfected operation, which will render this formidable hysterectomy still less often necessary in the future than it has been in the past.

"The complete removal of the uterine appendages, when efficiently performed, cures fibroids of the uterus with rapidity and certainty. And I will ask you to remember that this operation is not such a serious mutilation, and does not leave behind it any mark except a small linear scar on the perfectly closed abdominal parietes. The removal of the uterine appendages is attended with infinitely less danger to life than are the various operations for the removal of uterine fibroids.

"Are we then justified in subjecting our patients to the formidable operation of supra-vaginal hysterectomy when we can cure them by removal of the uterine appendages?"

It should be accepted as a settled fact that we are never justified in doing a hysterectomy when the appendages can be removed early in the growth of the tumor.

DIABETES INSIPIDUS

F. P. BUTLER, M. D., MARSHALLTOWN, IOWA.

July 3rd, '92, was called to see Mr. P. V. J., æt. 73; was informed by the messenger that he had diabetes, and was requested to be prepared to make an examination of the urine at the bedside. 20 years ago, he noticed that he had to get up once, and some nights 2 or 3 times to urinate; has always been a strong man living on a farm all his life; had never used liquor of any kind; in December, '91, his wife died, the blow was a very severe one to him, he not allowing the family to mention her name in his presence. In February, while asking the blessing he would suddenly stop, get up from the table, rush bareheaded out of doors, remain for some time, return and probably pick up a paper and read awhile, then go about his work; this proceedure was liable to be repeated at any meal. At this time there was a noted increase in the flow of urine; he consulted a physician who told him it did not amount to much and would soon pass away. He took a trip East and returned in a few weeks much improved; this was in April. His son who was in the West, desired him to meet him in Salt Lake City in May. He made all arrangements to do so, when he received a letter from his son, telling him that he could not be at Salt Lake by May first but would be soon. The son, being detained, kept writing that he would go soon, when, 10 days before I saw him, he wrote telling his father he would have to put off his trip for a long time. This affected the old man greatly, and at once there was a noted increase in the flow of urine; his head pained him very much and it was almost impossible for him to sleep, in fact it brought on an acute attack of his (I think) chronic trouble. He received one injury to the head in youth, it was slight and lasted him for a short time only; he has never had but one sick spell, that was typhoid fever years ago, from which he recovered completely; his habits have always been active and steady; he has taken excellent care of himself.

At my visit, I found him very much exhausted, with neuralgic pains through the head and extending to the back and hips; he had for nine days been passing an ordinary chamber full (110 oz.) of urine in twelve hours. I applied Fehling's test but the result was negative. I prescribed F. E. Ergot m. 12, once in four hours, to be alternated with 8 grains of phenactine. Securing a sample of urine I repaired to my office and made a more thorough test, and found no sugar and a sp. gr. of 1000. His mouth was dry and he, of course, was very thirsty, drinking about as much water and other fluids as were eliminated by the kidneys; bowels constipated; relieved by pil. cascara sagrada gr. 2.

July 4th, a sample of urine was brought me in the morning; the color was better; the sample of the day previous being the color of water, no sugar, sp. gr. 1002, the amount passed being one third less than that of the twelve hours previous; he had a very comfortable day, appetite fairly good, for the past two weeks it has been very poor; the evening sample of urine being being the same as that of the morning.

July 5th, rested about the same; passing the same amount of urine as on the third, increased the ergot to thirty drops, continued the phenacetine, appetite not improved, still very thirsty, slept better than he has for several nights; in the evening increased the ergot to one teaspoonful t. i. d.

July 6, Dr. L. saw him in consultation; confirmed my diagnosis; patient much the same as yesterday, possibly a little more exhausted; his appetite being so poor we gave extract beef, also brom. potass., grs. 10 in place of the phenacetine, urine same as yesterday. July 7, rested well last night; urine darker color; sp. gr. 1002, slight decrease in the amount; took more nourishment than usual, strength about the same; continued treatment. P. M., amount urine passed in eleven hours 124 oz., sp. gr. 1001; increased bromides to 15 gr. July 8, A. M. Some stronger to-day, ate a hearty breakfast, slept well during the night, mouth was less dry; from 6.45 P. M. to 7 A. M. he passed 114 oz. of urine, 10 oz. less than during the preceeding 10 hours; continued treatment with orders to nourish him as much as possible; headache better; from 7 A. M to 7 P. M., July 8, passed 135 oz. of urine, but seemed no worse for it, sp. gr. 1001. July 9, from 7 P. M., July 8, to 7 A. M. July 9, amount of urine passed 90 oz., less than he has passed since he was taken sick, sp. gr. 1005, the highest I have found it; slept very well all night, ate a hearty breakfast, bowls moved by enema, mouth less dry.

He gradually grew worse from this time up to the 23d; several times we thought he could last but a few hours longer; the morning of the 23d, his long-looked-for son arrived and he at once commenced to improve, and by the 3d of August he needed no medical care, and in a week or two left for the west, where he regained his original health.

This I think a case of diabetes insipidus, brought on by mental trouble in the loss of his wife, and by the great disappointment in not meeting his son as he had expected, and very much desired to do; it is purely nervous, because there is not a trace of his trouble that will show that it was brought on by anything else.

REPORT OF INTERESTING CASES IN ABDOMINAL SURGERY.

M. PRICE, M.D.

Dr. Henry Leaman has kindly consented to allow me to report this case of mechanical obstruction of the bowel, as it is one of great importance, and it is his report I give and not mine. You will remember a similar case reported for the same trouble nearly two years ago, and as that case was one that many thought strongly reported I thought best to call your attention to this one reported by Dr. R. Leaman and operated by Dr. Henry Leaman, and I had the pleasure of assisting in the work.

Dr. Leaman's Report.—I was called to see Thomas P. on November 1, 1892, who presented the following conditions, viz.: retention of urine relieved by the catheter, no passage from the bowels for three weeks previous, when he had done heavy lifting and active work. My idea was that there must be invagination or twisting of the bowel, and treated him after the usual methods both by mouth and rectum, still nothing in way of relief was accomplished; the enlarged adbomen grew until the tympanitic condition gave place to a slightiy dull note everywhere over the abdomen on percussion from excessive distention.

The vomiting, which was always present, now became somewhat stercoraceous. Respiration became shallow, rapid, and feeble from the encroachment of the diaphragm. Pulse feeble, mind wandering. But with all this the temperature never rose above 100°. On November 10, 1892, I called in my brother, Dr. Henry Leaman, in consultation. It was at once decided that nothing but an operation would give the patient any chance. Dr. M. Price was asked to see the patient and assist in the operation. All abdominal pain had ceased about three days.

The operation was done in a little room in Carleton Street, and, as usual to the location, the environments were not of the best. The patient was taken from the bed and placed on a table and a median incision made as in abdominal operations; the bowel enormously distended with liquid. A search was made for the point of obstruction, but I could not find any. Dr. Price also made an effort to find the obstruction. Failing to find one, we decided to open the bowel and empty out its contents and then make a thorough search for the obstruction. This also failed. The bowel was carefully stitched and the patient put to bed. In the next forty-eight hours he had about thirty evacuations. The bladder had to be relieved with a catheter. He made an uninterrupted recovery.

Mr. K., patient of Dr. Romaine, of Lambertville, N. J., aged thirty-two years, had had a number of recurring attacks of severe pain in the region of the appendix, all of which, save the last, have yielded in two or three days to purgation by salines. Last attack occurred May 2, 1893, and he was at once freely purged. This gave considerable relief; but the pain would return in twelve or fourteen hours in as much severity as ever. It was decided to have an operation, and I was asked to operate.

May 7. I carefully examined the patient, and from the history and the existence of peritonitis, and the fact that all his pain and suffering came from the region of the appendix, also that he had had a number of attacks with the same symptoms, I did a section and found from three to four feet of ileum adherent in mass over the head of the colon, greatly adherent and covered with inflammatory lymph. There was some pus in the mass, but very little. The bowels were completely separated, washed and replaced, and then the appendix looked for and found in a hard mass curled up and adherent to the head of the colon on one side and to the pelvic bone on the other. The adhesion to the pelvis was loosened, the appendix and bowel were brought out, but the bowel could not be removed without great injury. So, with thorough irrigation of the peritoneal cavity, stitching of the lower end of the wound, the hardened mass at the head of the colon, with the appendix attached, was placed directly under the upper edge of the wound and over it a gauze drain, which was left in place for thirty-six hours; afterward dressed daily.

Patient had no increase of temperature or pulse after operation, and made an uninterrupted recovery.

Mrs. H., aged forty years, suffering from great nervous prostration, constant pelvic pain for the last two years. She was treated by Dr. Peltz, her family phsician, with great patience and care, but without any lasting benefit.

I examined her in February in consultation with Dr. Peltz, and found no marked pelvic disease—nothing that warranted an operation. In one week after my visit she was examined by a Philadelphia gynecologist who used an instrument to measure the depth of the womb, and its freedom from adhesions. The instrument gave her violent pain and greatly increased her suffering. May 4th. I again examined her and found the uterus fixed, and on the left side a large fluctuating mass —right side adherent. May 6, 1893. I did a section and removed a large ovary tand tube distended with blood-clot, contents measuring about half a pint of decomposing blood and pus; the right side a pus tube.

How much this trouble was due to a

previous existing disease, or how much to the intra-uterine examination, I leave you to judge.

Herbert H., son of Dr. H., of Pemberton, N. J. Appendicitis. Operation; drainage; recovery. This is the third case in eight months that I have seen in the hands of this physician—two operated on and recovered. The third, a young man nineteen years old. When I was called he insisted he was much better, and would not submit to operation. He had well-marked symptoms of abscess of the appendix. He continued to improve, and for three months afterward declared to Dr. H. that he was perfectly well. While unloading a can of milk he felt something give way in the right inguinal region and died in twelve hours, before anything could be done for him, of peritonitis.

GANGRENE OF FOOT AND LEG.

B. H. POTTS, M.D., Philadelphia, Pa.

I wish to call attention to a few cases of gangrene of the foot and leg that occurred during the service of Dr. Willard in the Pennsylvania Hospital, and mention one case particularly that shows the efficiency of the high operation performed as early as possible.

CASE I. GANGRENE OF FOOT—RECOVERY.

Man, æt. 42 years. Had always been a healthy man. Two weeks before admission to the hospital he noticed a pain in the outer side of the left foot and that the little toe of the same foot was black. No history of traumatism of any kind could be obtained. The pain gradually grew worse, and one week after admission the nail of the little toe was extracted. Sharp and lucinating pains now began to shoot from the toes to the ankle. Two days later the gangrenous portion of the toe was removed, and a laudanum poultice applied. At the end of another week the entire toe was removed. About this time the glands of the left groin became enlarged; ung. hydrarg. was applied and under this treatment they gradually improved. The wound of the toe healed at the end of ten days, and one week later patient was discharged cured.

CASE II. GANGRENE OF FOOT WITH ERYSIPELAS—DEATH.

Patient was admitted to the hospital in 1883. Twenty years before this his left leg broke out with ulcers on the inner side of the tibia, which discharged until six months before admission, when they healed leaving cicatrices; about this time his right foot began to trouble him. At this time also, six months before admission, his right foot was frost-bitten, and steadily grew worse. The outer side of the great toe became sore and painful, and this condition extended to the inner side of the foot. On admission the great toe was gangrenous throughout its extent; there was considerable sloughing at the end, and its nail had come off; the second toe had also lost its nail and both were cold and insensible. Vessels were tense and thickened, but not atheromatous; glands in the right groin were much enlarged. The slough gradually extended along the inner side of the foot, leaving the metatarsal bone of the great toe bare and necrosed. The muscles on the sole of the foot had sloughed to within two inches of the inner malleolus. This slough was gray ashen in color, had a very offensive odor and was painless.

The foot was dressed daily with boroglyceride for one week when a charcoal poultice was applied. One by one the toes were removed, until at the end of five weeks all the toes of the right foot were gone. The granulations now became purple and livid; there was no soreness or pain. Inflammation of an erysipelatous character set in, and the general condition became very poor. Patient was given tr. ferri. chlor. and quinia. The gangrenous process slowly advanced until the slough extended to the ankle. The patient began to steadily lose flesh and strength and died from exhaustion at the end of seven weeks.

CASE III. GANGRENE OF BOTH LEGS—DEATH.

Man, æt. forty-four years. While exposed one cold day patient's feet were frozen, the left one more severely than the right. During the six months following the exposure, but little attention seems to have been paid to the feet, but the process of gangrene started and steadily advanced and at the end of that time, the line of separation having formed, the toes of the left foot were amputated. On the day following the operation, gangrene of the stumps ensued and when patient was brought to the hospital, one week after the operation, the gangrenous process had extended to the knee on the anterior part of the leg and a few inches below the knee posteriorly. Inflammation extended half way up the thigh which was greatly swollen and crepitant. Patient was very weak; arteries were atheromatous.

It was decided to wait until patient's condition improved and he was put on a course of tonics and stimulants. The leg was dressed with a hot solution of bichloride 1-1000 and wrapped in cotton and wax paper. The line of demarcation formed at the end of ten days. Patient's condition was improving slowly but steadily. Two weeks after admission, a small black spot appeared on the great toe of the right foot which was very painful, but did not spread. Four weeks after admission, the gangrenous portion of the left leg was taken off at the knee joint; the tissues were all dead and there was no hemorrhage; no sutures were introduced but the flaps were strapped. The end of the femur was black and showed no line of demarcation.

Three days later the patella was dissected away from the soft tissues and the periosteum from the bone and the latter sawed off about one inch and a-half above the condyles. The great toe of the right foot was amputated, but at once began to slough.

At the end of two months the leg stump had entirely healed, but the stump of the toe was discharging profusely. Until this time the patient had seemed to improve, but now the gangrenous process began to extend from the toe to the ankle, involving the whole foot, the inflammation extending to the knee. Appetite became poor and strength began to fail and patient went down steadily until the end of the third month when he died from exhaustion.

CASE IV. GANGRENE OF FOOT.—HIGH OPERATION.—RECOVERY.

Man, æt. fifty-three years. Sixteen years ago a piece of ice fell on the right foot crushing the fourth toe; this wound was carefully treated but was very slow in healing and caused him much pain subsequently. Eight months previous to admission, in the spring of 1892, a horse trod on the right foot and two months later another horse trod on the same foot. After this last injury the fourth toe of the right foot bursted and the whole foot looked unhealthy, especially the toes, looking blue and feeling cold; blisters formed in different places at different times. In the latter part of July, 1892, the fourth toe was amputated; the stump healed very slowly. During August all the toes began to show decided signs of gangrene and the pain increased in severity.

On admission, January 7th, 1893, the remaining four toes were found to be gangrenous and the entire lower half of the foot was swollen, tender and caused severe pain. The urine was free from sugar and albumen. Vessels were atheromatous. An immediate high operation was advised.

January 20th, 1893, the leg was amputated at the knee joint. No Esmarch bandage or tourniquet was used, but digital compression was made upon the femoral artery in Scarpa's triangle, and the vessels caught up as they were cut. The popliteal artery was tied, very loosely, with a broad ligature composed of four strands of No. D catgut. No antiseptic solution of any kind was used in the wound, but a very dry stump was obtained and closed up with catgut drainage.

Patient rallied well following the operation. At the end of three weeks the stump was dressed for the first time and found to be clean, sweet and perfectly united.

Patient was now gotten upon a chair, then on crutches and at the end of seven weeks was discharged. He has reported several times by letter during the past few months and is doing very nicely. Is in better general health than he has been for years.

It is to the last case I would particularly call attention as I think it shows the advantages of a high operation. The case did not present any favorable symptoms; the patient was weak and emaciated; had been suffering very severe pain for months and was very nervous and excitable. His arteries were very brittle. The gangrenous process was slowly extending up the foot, nearly the whole of which showed signs of inflammation. The result obtained from the operation, however, could not have been better for there was left a firm, solid stump which he will be able to use with perfect safety.

SOCIETY REPORTS.

SURGICAL SOCIETY OF LOUISVILLE.

Stated Meeting, April 10th, 1893.

Dr. John C. Cecil, President, pro tem. in the Chair.

INJURY TO HAND—PROPOSED OPERATION.

Dr. Turner Anderson: This young man five months ago received a cut in the hand from a wood chisel; he suffered very little at the time and the wound healed. About a month after he began to suffer considerable pain and the thumb began to swell. He went on working as usual notwithstanding the inflammation and pain.

I think the treatment is plain; there is every appearance of pus and I believe it will only be necessary to make an incision and clean it out thoroughly. This is what I propose to do.

DISCUSSION.

Dr. A. M. Vance: Dr. Anderson's suggestion as to treatment in this case I believe is the only rational procedure, and there is no doubt in my mind but the trouble will be completely relieved by such an operation.

TUBERCULAR ARTHRITIS.

Dr. W. L. Rodman: I saw this young man with Dr. Chenoweth, and I am sorry the doctor is not here to give the history in detail. I first saw the patient at the University Clinic and asked him to come out to my office that I might get the whole history. I have a memorandum on a card which I will read, it being a few points in regard to the history that I was able to elicit from the patient himself: R. C., aged sixteen years; parents living and in good health. Gives no special history of tuberculosis; several brothers and sisters living and in robust health. Two brothers died during infancy. Felt perfectly well until December 1st, 1892; at that time commenced to have daily chills about two o'clock P. M., followed by fever and sweats. December 20th, right arm commenced to pain him at the elbow. December 26th, noticed swelling for first time; swelling greater at elbow joint, but not marked at any point. At that time he thinks the swelling was about half as extensive as it now is. While it was painful he could use his arm some. Has had a cough since December 1st last. Lost about fifteen pounds in flesh. Arm has not increased in size for six weeks. I would like to have the opinion of the society as to diagnosis and treatment.

DISCUSSION.

Dr. Turner Anderson: Is there evidence of disease of the lung?

Dr. W. L. Rodman: Yes, in the lower part of the right lung.

Dr. W. C. Dugan: I operated upon a patient having a condition very much like this at the City Hospital during my term of service there last year. Patient had been treated a number of months for rheumatism and was referred to me from the medical ward. I resected the arm and found it was a condition of refying osteitis; removed the olecranon process, found the bone perfectly soft; and with a pair of forceps I clipped off the condyles, being careful not to interfere with epicondyles to which the lateral ligaments are attached. There was a good deal of œdema of the arm, which soon disappeared. This patient has a good limb with almost perfect flexion and extension and has regained his health.

In regard to treatment in case referred to by Dr. Rodman: I would excise the elbow, and treat it openly with iodoform dressing.

Dr. A. M. Cartledge: I think it is a case of tubercular arthritis, although the shape is a little unusual. The amount of induration on one side seems unusually low, and looks a little curious. I take it that there is very likely synovitis as well as osteitis. I agree with Dr. Dugan that resection is the proper procedure.

Dr. H. H. Grant: From the examination I made of the case I think it is tubercular arthritis; there can scarcely be a doubt about it, but that one doubt would be that there might possibly be some sarcomatous disease of the joint. There is very little effusion.

Dr. A. M. Vance: What part would the phthisis play in treatment of the joint?

Dr. W. C. Dugan: I should not consider it at all.

Dr. W. O. Roberts: I agree perfectly with the statements already made, that it is clearly a case of tuberculous disease of the joint and resection is the thing to do.

Dr. W. L. Rodman: Everybody has expressed exactly the same opinion that I had already formed in regard to this case. I felt almost positive it was a case of tuberculous disease of the joint, after taking the patient to my office and getting the history. I believe the joint ought to be cut into and very likely resected.

PARTIAL THYROIDECTOMY.

Dr. A. M. Vance: Here is a specimen I removed from a young man twenty-five years old yesterday. The tumor was just over and a little to the left of the larynx. When an incision was made, the cartilages were completely exposed. At the time I first saw the case I thought the enlargement was part of the thyroid gland. I saw a similar case in this city some time ago, the growth was removed which looked and felt very much like thyroid gland. The history was substantially the same as that of the case reported to-night. In the operation yesterday I found a great blood supply to the tumor, three very large vessels; owing to this I was more convinced than ever that I had removed a portion of the thyroid gland. Dr. Rodman saw the specimen shortly after the operation, and thought the trouble was probably lymphatic. Microscopical examination, however, proved it to be thyroid gland. I will quote the microscopists report:

"Louisville, Ky., April 9, 1893.

Dear Doctor:

The growth left me has all the appearance macroscopically of thyroid gland tissue, and thus it proves itself to be upon microscopical examination; consisting of a frame work of fibrous tissue enclosing glandular spaces, lined with small, flat epithelial cells. The glandular spaces are in part filled with a homeogenous material (colloid), others are filled with round cells (lymph cells).

Diagnosis—Thyroid Gland.

Yours sincerely,
Louis Frank.

Dr. A. Morgan Vance."

This is the second case of the kind I have seen in the last twelve months.

DISCUSSION.

Dr. E. R. Palmer: Was there much hemmorhage during the operation?

Dr. A. M. Vance: There would have been had I not used clamps.

Dr. W. L. Rodman: I saw Dr. Vance shortly after he removed this growth and he asked me to look at it and give my opinion upon it. I looked at the specimen rather carefully; it was not opened at the time, and told him after my examination that I thought it was a lymphatic gland. I am more certain of that position now since it has been thoroughly opened, notwithstanding the microcopist's report. It has every appearance in the world, color and everything else, of a lymphatic gland, and I am reasonably sure that is what it is. It does not look like thyroid tissue. I have dissected a hundred thyroid glands, and am sure they did not have this appearance. The history of the case furthermore points clearly to lymphatic enlargement rather than to disease of the thyroid gland. We do have growths of the thyroid that occur sometimes from an accessory portion, but as I have said before this does not look anything like thyroid tissue. Thyroid tissue is purplish red, about the color of liver.

Dr. A. M. Cartledge: I would suggest that Dr. Vance have Dr. Frank make some additional sections in this case. If it is thyroid tissue it has every appearance of having undergone malignant degeneration. I agree that it does not look like thyroid tissue. I know of no change that the thyroid body is subject to which would give it such an appearance, unless it be sarcoma. I have never seen so much connective tissue in any form of goitre as there is in this case, and I am not aware of any pathological condition that would give it this appearance. However, the microscope ought to show just what it is.

Dr. A. M. Vance: Goitre affects the central lobe of the thyroid, the shape being caused by pressure of the skin over the hypertrophy. In the case reported by me the thyroid gland on every side looked like this tissue when it was exposed. This is evidently the isthmus hypertrophied.

Dr. W. L. Rodman: Benign growths from the thyroid gland are practically unknown. The only benign growths or enlargements that we have of the thyroid are originally cases of hypertrophy or bronchocele, and then cystic degeneration of the gland. Malignant disease does sometimes occur, but it is exceedingly infrequent, so infrequent that I doubt if any gentleman here has ever seen one. I have never seen one, and in the absence of benign growths from the thyroid, the comparative rarity of malignant growths of the thyroid, with the history of this case I feel quite safe in saying that it is an enlarged lymphatic gland.

Dr. A. M. Vance: I have very little to add in closing. Certainly I would rather take the testimony of Dr. Frank (who is recognized as one of the best and most accurate microscopists in the city) after a careful microscopical examination, than the opinion of Dr. Rodman or, in fact anybody else, based upon a macroscopical examination of the specimen. If Dr. Rodman will specify some anatomist that he would like to make further investigation of the specimen, I shall be very glad to send a portion of the growth to him. Or if he prefers, I would be glad to divide the specimen with him, that he may have it examined by anybody he desires.

INTESTINAL RESECTION.

Dr. H. H. Grant: I have a specimen here which is the result of an intestinal resection made upon a living animal two weeks ago. After killing the animal I removed about eight inches of the gut embracing the portion resected, which has not yet been opened, as I wished to exhibit it here with a view of showing how much the lumen of the bowel is diminished, if any; and also to see the result of the resection generally. The animal was thoroughly anæsthetized, the incision made and several inches of the intestine exposed; resection was quickly done by the aid of the clamp devised by myself which I present here for your inspection, and which was also shown at the meeting of the Southern Surgical and Gynecological Society several months ago. The animal was under chloroform thirty-five minutes, eleven minutes were occupied in suturing the intestine; the ends were invaginated in the usual way, continued suturing being employed. By an examination of the specimen you will see there is very little contraction; the sutures have been completely buried; there was no peritonitis; the animal did remarkably well after the operation, and the result is perfect. The operation was done very leisurely, and I am satisfied it could be easily completed in twenty minutes. No plate of any kind was used. I have made this experiment several times, using only one line of suture and the result has been perfect, except in one instance.

This clamp is used only for resection; the ends of the intestine are laid parallel with each other, and the suturing done while the clamp is in situ. It shortens the operative steps very much, renders approximation of the openings absolutely accurate, and defines the limit of the fenestra beyond chance of error. Such a clamp takes the place of skill to a considerable extent.

DISCUSSION.

Dr. W. C. Dugan: The clamp certainly shortens and simplifies the operation very much indeed. The clamp designed by Dr. Grant is the best contrivance for the purpose that I have ever seen.

VULVO-VAGINAL TUMOR.

Dr. W. O. Roberts: This specimen is simply a vulvo-vaginal gland dissected out to-day. The patient was a young widow who noticed this growth three years ago, and claims that a short time before the appearance of the growth she was considerably bruised during coitus with her husband, that there was a good deal of swelling about the parts and some time after that while bathing she noticed this lump. She has been worrying a great deal about the matter, simply from the fact of the growth being there, and came to the city to have it removed. I have seen a good many such cases and have usually laid them open, not finding it necessary to dissect them out. However, in this case the patient was very anxious to have it removed, which was done very easily and quickly.

DISCUSSION.

Dr. W. L. Rodman: Was the growth on the left or the right side?

Dr. W. O. Roberts: On the left side.

Dr. E. R. Palmer: I see quite a number of these cases, and the question asked by Dr. Rodman brings up a point that I had not thought of before; in three of the cases recently seen by me the enlargement was on the right side. I have never removed but one of them in toto. When this complete operation is done there remains a depressed, hard cicatrix at the point of removal, which is entirely avoided when these glands are simply opened, curetted and packed and provided the operation is thoroughly done, the cure is equally assured.

With reference to the etiology, I believe almost invariably that the condition is of gonorrhœal origin. It is hard to say that this is absolutely the case, but I believe in the vast majority of cases it can be traced to gonorrhœa. The usefulness of the gland is permanently destroyed by these enlargements so far as future function is concerned, whether they be dissected out or curetted and packed; the secretion is unilateral afterward, that is, is confined to the side not diseased.

Dr. W. L. Rodman: I have seen I think five or six cases of enlarged glands of this character in my experience, and my observation has been different from that of Dr. Palmer; I have never seen but one on the right side. I would like to ask Drs. Anderson and Cecil what their observation has been in cases occurring after labor as regards the side affected, and their explanation as to why the left side is more frequently diseased than the right. It has not only been my experience that the left side is far more often affected than the right, but in looking the matter up several months ago, I found that the vast majority of these enlarged glands occurred on the left side. The only case I ever saw occurring on the right side was the last case I saw which was two or three months ago, a patient of Dr. McDermott's. The enlargement was noticed soon after child-birth, patient forty-five years of age.

My experience differs again with that of Dr. Palmer. I do not think I have seen any cases where they could be traced to gonorrhœa. Most of the cases I have seen have been after child birth, in a class of patients above suspicion.

Dr. Turner Anderson: With reference to the location of these enlargements, I do not think I have seen them more frequently on the left than on the right side. Concerning the etiology—it is my opinion that the majority of them occur from gonorrhœal infection. At least I have seen more cases among prostitutes than any other class of women. There is another point of some importance in connection with the etiology. Occasionally after perineorraphy, obstruction of the external duct is sufficient to cause cystic degeneration of the gland,—which we must recollect is of the same character as the mammary and other glands of the body, and just as liable to undergo cystic degeneration. I have a case now that came to me a few days ago with a tumor in the left side of the vagina which I diagnosticated without any difficulty as an enlarged vulvo-vaginal gland, which has probably undergone some kind of degeneration, as it has attained a considerable size. This patient was operated upon in Cincinnati for lacerated perineum, and it is probable there is obstruction of the external duct, which we know opens just within the ostium vagina. I do not expect to find an abscess, but believe the function of the gland has been interfered with by occlusion from the operation of perineorraphy. The case was a satisfactory one as regards the operation, but it has probably obstructed the gland. This is a matter that ought to be taken into consideration in perineorraphy, but at the same time I do not see how it can well be avoided.

With reference to the point raised by Dr. Palmer concerning the treatment of these cases—incision and packing, and in that way preserving the symmetry of the parts, preventing shrinkage or depression—I do not know that my attention has been especially directed to that. The usual operation is to simply incise the gland, pack and let it heal from the bottom. But in the case just referred to, upon which I shall operate in a few days, I believe I will adopt the plan followed by Dr. Roberts, and dissect out the gland bodily. I think this is advisable owing to the size of the gland.

Dr. J. G. Cecil: The point made by Dr. Palmer seems to me to be the correct one in regard to the etiology, as far as my reading and observation go, that these enlarged glands are largely due to gonorrhoeal infection. The point made by Dr. Anderson concerning the class of patients, I think will be borne out by observing the patients in which these troubles are usually found. Certainly, I have seen more in prostitutes than any other class of women. I do not see how they can follow as a result of labor, unless it be in the manner already described by Dr. Anderson as following the operation of perineorrhaphy; that is after the duct was torn across in a lacerated perineum, then we might have occlusion of the duct and cystic degeneration result. I can conceive how that might follow as a result of labor, but I cannot see how there could be any other method of degeneration or abscess as a result of labor.

I was quite impressed with the description, or method of operating described by Pozzi. It is sometimes very difficult in dissecting this gland out, especially when it is simple cyst, to prevent rupture; as long as we can prevent rupture dissection s easy enough, but if rupture occurs then t becomes more difficult, then complete issection is advocated, it being difficult o follow the cyst wall after it is empty. Iis method is described about as follows: Ie introduces a trocar and canula withdrawng the fluid before he attempts to operate, lls it with a warm solution of paraffine, hen the application of cold converts the araffine into a solid tumor, which makes a very nice ground to work upon.

I am inclined to the belief that the total obliteration of these glands is the proper treatment. Of course the function is destroyed if an incision is made and the gland packed; if there is an abscess or cystic degeneration they are of no further use and might as well be removed.

I have never noticed any particular diffierence in the two sides, and think they are as apt to enlarge on one side as the other.

Dr. W. O. Roberts: I have seen a number of these cases occurring in other than prostitutes. I can recall now three cases in newly married women. This, I take it, is cystic degeneration; I do not think there is any pus in it; it has existed too long, something over three years.

Note: The tumor was opened by Dr. Roberts and found to be cystic.

Joseph M. Mathews, M.D., then read a paper on

DISEASE IN THE SIGMOID FLEXURE, WITH REPORT OF CASES.

About one year ago, I had the honor of reporting to this society some investigations that I had been making of diseases in the sigmoid flexure. The paper elicited considerable discussion, and I was asked to prolong the report at the following meeting of the society. Inasmuch as the subject was treated at length in my work on diseases of the anus, rectum and sigmoid flexure, which appeared shortly thereafter, the second report was never made. From the friendly reviews of this chapter in the book and from many letters of commendation that I have received from the profession, I take it that the discussion of the subject was not inopportune. This paper is intended only to give a recitation of some cases that have fallen under my observation lately and to mention some procedures looking to the surgical treatment of the same. Although recognized from all time that the sigmoid was a favorite seat of disease, but little was done for its treatment, either in a medical or surgical way, until recently. As far as my knowledge goes, Dr. W. T. Bull was the first to successfully remove the sigmoid flexure for malignant disease. A few months ago Dr. Lange reported three cases of a similar kind, with one success. It must be understood that success means, at least in Dr. Lange's cases, the survival of the patient from the operation. The time is too short to say whether the eradication of the disease is effectual. Dr. Bull claims that his patient lived five years after the operation. In a note to me concerning the case he says, "The carcinoma was excised in January, 1887; she was in good health up to October, 1891, and there was no recurrence at the autopsy in December, 1891, being nearly five years." Senn has never been a believer in colotomy for any condition, but he has devised other operations to meet the demand. He has anastomosed the ileum into the rectum, and also the colon to the rectum, successfully, and claims, as a result, that if stricture of the sigmoid is to be overcome, his operation would be preferable to an artificial anus, if the opening where the anastomosis was made did not with time contract too much. To carry out the idea of Murphy, that, by using his button, anastomoses of the intestine could be made either end to end or lateral in a few minutes, Dr. Joseph B. Bacon, of Chicago, has just recently been making some very interesting experiments, looking to the surgical treatment of non-malignant stricture of the sigmoid flexure or rectum. Because of the importance and newness of the subject, I will be permitted to quote freely from a late article by Dr. Bacon, describing the method. "The operation consists in completely severing a portion of a loop of small intestine that is lying in proximity to the rectum and anastomosing each end with the rectum, so as to form a new channel around the stricture. The mesentery of the severed piece of gut is left intact. A piece of intestine is selected from the loop, at a point where the mesenteric blood vessels supply a large nutrient artery for each end of the piece to be transplanted. It is necessary to remember, in cutting out a piece for transplanting, that it must be long enough to extend from a point below the stricture to a point above the stricture where the rectal wall is not too much thinned by ulceration; and also to remember that the button to be inserted into each end will shorten the piece about one and a half inches. The operation is completed by scarifying the approximated surfaces of the rectum and transplanted piece of gut and suturing them together, so as to have the two walls united into one firm septum. At a subsequent operation this septum is removed by compression forceps and the lumen of the rectum and transplanted piece is made into one cavity, and the sloughing out of the compression forceps will destroy one-half of the stricture, together with the septum, thus putting an end to the contraction of the cicatricial tissue forming the stricture. The mesentery of the transplanted piece of gut is sutured in close approximation to the parietal wall, to prevent a possibility of a loop of intestine sliding under it and becoming strangulated. A Murphy button is now used to make an end to end anastomosis of the gut, from which the transplanted piece was resected and its mesentery sutured carefully, so as to leave no opening for hernia to occur."

I will make this report by Dr. Bacon suffice for any further mention or discussion of the surgical treatment in such cases, reserving the right to discuss this method in some future article.

There are several conditions which, if left alone, will produce such pathological changes in the sigmoid flexure as to call for the surgical interference as suggested by Bull, Senn, or Bacon, and yet, if these conditions are recognized early, can be prevented from such ultimate results. I must confess that after a stricture has formed at the sigmoid or in the rectum, in the great majority of cases no good can come from the treatment of the stricture *per se*, and recourse must be had to such procedures as those mentioned in this paper. And in this day, when such aseptic surgery can be done in the peritoneal cavity, I see no reason why such attempts as suggested by Dr. Bacon should not be undertaken. But as prevention is better than cure, I will conclude my paper by dealing with the treatment of such conditions as give rise to the necessity of such operations.

The sigmoid flexure is peculiarly liable to local disease. Outside of malignant affections its anatomical arrangement is such, that it is made the receptacle of the fæces, both as the mass is attempting to pass out in the act of defection, and the remaining portion is pressed back by an anti-peristaltic movement. Hence it is no wonder that it is subjected to congestions, inflammations, ulcerations, etc., and these combined frequently establish non-malignant strictures. I have tried to demonstrate in a former article that the flexure was often, I might say commonly, the seat of impaction by fæces, and the fatality of such impactions sometimes all can attest. In addition to many cases of sigmoid disease that I have already related, I now desire to call attention to but a few:

No. 1. Mr. J., aged twenty-eight. By occupation a civil engineer. About five months ago complained of a slight diarrhœa. He consulted a physician, who gave him the usual remedies for such cases, but the discharges increased, from four or five daily, to twelve or fifteen in the twenty-four hours. His condition growing serious, and his disease not responding to internal treatment, his physician sent him to me, thinking that the cause might be found in the rectum. His diarrhœa had now continued five months and he had lost forty pounds of flesh; no energy, and all appetite gone. An examination was now made of the discharges and they were found to be composed of blood, mucus and pus. Not dysenteric, as no elevation of temperature or pulse occurred at any time. An examination of the rectum revealed an extensive ulceration, beginning about four inches up and extending evidently into the sigmoid flexure. This man gave no history of syphilis. I had him discontinue all internal medication, go to an infirmary and observe perfect rest in bed, first giving him a free purge. I then washed out the sigmoid with hot water. He was put on a special diet and the local treatment begun, which consisted in depositing in the flexure daily one ounce fluid hydrastis diluted with two ounces of water. From the first injection the discharges began to assume a natural condition, and at the end of ten days all mucus, blood and pus had disappeared. In this time his appetite had returned and he began to take on flesh, although on a liquid diet. At the end of two weeks he left for Chicago with directions to inject the sigmoid every alternate day. This case is but a sample of a number that I had to report, but my time being limited, will make this one suffice for the evening.

DISCUSSION.

Dr. H. H. Grant: Could the small bowel be made to do the duty of the rectum in case of anastomosis? Would not the fecal matter block up below where the transfixion was effected? Would it not be better, in other words, to make an artificial annus, as it is now made, for the relief of these conditions?

Dr. J. M. Mathews: I suggested that it might be better than a colotomy, and for that reason suggested that it might be better to anastomose the sigmoid flexure or the colon to the rectum, as practiced by Senn than to attempt the operation suggested by Bacon.

Dr. W. L. Rodman: I think Dr. Mathews has called our attention to a very important matter, that is, flushing the sigmoid flexure. For this purpose I believe the rectal bougie preferable to the tube, as the latter is liable to curve upon itself. I have seen harm result from the use of the tube. I once made a post mortem upon a patient of a medical friend who had been treated by local applications for dysentary through a rectal tube fully eighteen inches in length. The patient died of peritonitis. In making the post mortem I found the belly full of fluid, soap-suds, etc., used in the injections, which had passed out through a perforation of the gut made, I think, by the tube.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting, May 24th, 1893.

Dr. Mordecai Price presented a Report Interesting Cases in Abdominal Surg-y. (See page 15.)

DISCUSSION.

Dr. Joseph Hoffman: Dr. Price stated t in the cases on which he had operated had not met with high temperature ex-pt in two instances. The question of temperature is an interesting one. In one of the most serious cases of appendicitis the temperature was not markedly high, although there was gangrenous gut and abscess. The pain and tenderness were, however, marked. I have seen a case in a young child where the temperature was abnormally high.

With regard to operation: I am puzzled to decide in what cases operation should be done. I have seen cases in which the condition seemed to be imminent, recover without operation, and I have seen cases apparently parallel die. Where the line is to be drawn between the cases that will recover under medical treatment and those in which operation is required is difficult to decide. Within a week I was called to see a boy eighteen years of age in a second attack. There was high temperature and a mass easily to be made out. The bowels had been bound up, and no relief was afforded by anything that had been done. I put the boy on purgative medicines and within forty-eight hours there was a reduction of temperature, and in another forty-eight hours the abdomen was perfectly pliable and the boy apparently well. I suggested operation, but it was not accepted. Whether or not this trouble will come back, I cannot say.

DR. ADDINELL HEWSON: I have made some investigations in the dead body with reference to the position of the appendix. I examined some 74 bodies. In this number I found evidence of appendicitis of more or less severe degree in 23 cases. Only one showed that there had been operative interference. The investigation was not made to determine the presence of appendicitis, but simply to obtain anatomical data by which the position of the appendix could be more definitely reached. The position of the appendix varied considerably. In one instance it was in contact with the under surface of the liver. In many instances it was in the cavity of the pelvis. In many it was above the crest of the ileum, and in the majority of cases the base of the appendix was above the inter-iliac line—this is the line drawn from one anterior superior spinous process to the other. I made some notes in reference to other points in connection with the appendix, but they are not germain to the discussion. I merely wish to recall the fact that there were evidences of appendicitis in 23 of the 74 cases.

The results of examinations will be published later in the *Amer. Journ. Med. Sciences.*

DR. DANIEL LONGAKER: It seems to me that the last case reported is only explicable on the assumption that, as a result of rude manipulation, some focus of preexisting disease was disturbed, or, if the trouble was not produced in that way, it must have been set up by the production of endometritis and extension from this point. I assume this from an experience that I have had. A woman supposed herself pregnant and introduced a knitting needle into the uterus. She experienced no pain at the time, but in the course of a few weeks there was severe suffering and septic endometritis. Whether or not she was pregnant was never ascertained. The inflammation soon extended and involved the tubes, and in a few weeks there resulted a large tubo-ovarian abscess and a decided attack of pelvic peritonitis. The trouble was promptly removed; but I may say that the endometritis still lingers, and will probably require a second operation, that of curettement. I would ask whether or not this condition exists in the case referred to by Dr. Price.

DR. JAMES COLLINS: Regarding the relations of medical and surgical treatment in appendicitis, I am sorry to report that I have seen several patients die in whom I had advised operation, but was overruled by the medical attendant. I have seen one or two saved, but that is such a limited number that I dare hardly speak of it in connection with the number of cases reported to-night. I suspect that it is safe treatment, where the obstruction and symptoms of appendicitis continue after the second day, to consider the advisability of surgical interference, and especially so if there is present a sign not often mentioned, which in the male is pain in the line of the cord and testis. In one or two cases the medical attendant has taken the ground that because there was no high temperature there could not be any very serious inflammation in progress. I have for many years advocated operation in appendicitis, and I have said that I would never let another case where there were evidences of peritoneal inflammation die without operation.

The PRESIDENT, DR. DE FOREST WILLARD: I am glad that Dr. Price emphasized the point of low temperature which is so common. It seems that in these cases the temperature is positively no indication of the severity of the case, and is not to be relied upon unless it is very carefully watched. There are certain cases where, if it can be watched day after day, it then becomes an important element in diagnosis and prognosis.

In common with Dr. Hoffman, we are all seriously puzzled to draw the line between the cases that will recover without operation and those which should be operated upon. This subject cannot be discussed too frequently, and every case should be recorded and thoroughly considered and studied.

Dr. George E. Shoemaker: The point of diagnosis is one of great interest, and those who have had surgical experience with appendicitis should emphasize the fact that there are no signs which are absolutely reliable. Dr. Willard will recall a case which I recently reported, and which he afterward saw, where there was gangrene of the appendix and where there was no tumor; where there was no tenderness in the rectum, and where there was no tympany. The belly was scaphoid, and yet there was gangrene of the appendix, with perforation. I was utterly deceived as to the necessity for operation in a case which occurred several years ago. A German woman of exceptionally good physique, and whom I knew to have no uterine or tubal disease, was suddenly taken with chill and pain in the right iliac fossa. The temperature went up to 104°, and the symptoms persisted for four days. I considered the case to be one of appendicitis, feared pus, and advised operation. I had a consultant who also advised operation. The patient refused and asked to see still another consultant, and in the twelve hours of consequent delay her condition completely changed for the better, the temperature went down and in time she made a complete recovery without operation. Within a few days she passed pieces of tapeworm, which probably had been the exciting cause of the appendicitis. As a contrast to this unexpected recovery, on the very day of my proposed operation a young man died in this city because he had a pint of fetid pus about his appendix, and because one the most capable diagnosticians any- ere denied its presence till too late. The eat majority of cases that I have been lled upon to observe have gotten well thout operation, because pus did not rm. But the attacks recur. This ques- n is one of gravity. A gentleman came me to-day to know what I would advise a case which I had seen some years ago th him. The patient then had appen- citis and recovered; but the attacks have recurred, gradually becoming more severe and the intervals shorter. I said that in such a case operation was advisable, but each case must be studied by itself. There are no definite rules, and never will be.

Dr. William M. Welch: I have seen a few cases of appendicitis, and recall some four or five that have recovered without operation. Still I am inclined to think that surgical interference is a matter to be thought of in all such cases. Last summer I saw a case in consultation where I proposed that a surgeon be sent for with a view of considering the propriety of an operation; but the patient positively refused, and after suffering for two or three months recovered, as I believe, perfectly. One of my cases, a child, developed an abscess, which discharged through the umbilicus for a considerable time; but even this was followed by recovery.

You will remember, Mr. President, that a year ago a discussion took place here on this subject, and that the surgeons insisted that an operation should always be thought of, while the physicians held that surgical interference was required only in a small proportion of cases. There was present at that meeting a layman of considerable prominence who told me the next day he was deeply interested in the discussion, as he had recently gone through an attack of appendicitis; that the surgeon who was called in consultation advised operation, while his attending physician opposed it. He said he followed the advice of his physician and is glad that he did so. I mention this to show that recovery from appendicitis may follow medical treatment when surgical interfence is thought necessary.

Dr. James P. Mann: I wish to say a few words in regard to two cases that have come under my notice. One was a physician, a friend of mine, and a man of considerable surgical experience, especially in abdominal work. He simply felt sick, but had no pain and no elevation of temperature. There was a little constipation. A diagnosis could not be made, until, finally, Dr. Wyeth, of New York, inserted his finger into the rectum and found a soft tumor on the right side. He then hazarded a diagnosis of appendicitis. The case was operated on and twelve ounces of pus removed, with recovery.

The second case was that of my son, two-and-a-half years old. He was taken sick in the night and appeared to have a little pain in the abdomen.

The temperature remained normal. The case was seen by Drs. Joseph Hearn, A. G. Hinckle, and Allis. For the first three days there was some obstruction of the bowels, but that passed away under simple treatment. The child seemed to be improving, but at the end of a week he suddenly went into collapse and died rapidly.

The post-mostem showed that there had been appendicitis with rupture and general peritonitis, and all this without any symptoms of appendicitis that could be appreciated.

DR. G. BETTON MASSEY: I have seen two cases of appendicitis that have led me to certain conclusions in the matter. The first one was a gentleman of prominence in the city, who had been nursed through seven attacks of appendicitis. This man was almost black from the prolonged use of nitrate of silver. Some months after I saw him he died in a recurrent attack.

The second case occurred recently in a young woman. The attack was diagnosed by myself and others as a second attack of appendicitis. I advised the patient to put herself in the hands of a surgeon for operation after recovery. This she did not do. Three months later she had another attack and died. Of course, this is a small number of cases to form a judgment upon, but it leads me to the conclusion that surgery is the best treatment, at least after the second attack—not during the attack but in the interval.

THE PRESIDENT, DR. DE FOREST WILLARD: Dr. Welch is in error in intimating that the surgeon, "of course, urges operation." A few years since this subject was discussed independently by two societies, The Association of American Physicians and the American Surgical Association. The consensus of opinion in the surgical society was rather against the operation; that it was an exceedingly difficult and dangerous one, and that it often was impossible to find the appendix; while the physicians strongly advised operation, and the speakers considered it to be perfectly simple, and held that no one would have any difficulty performing it. From my own experience, and I have seen a large number of these cases in the past few years, I am sure that surgeons refuse operation in a far larger number of cases than they operate upon. The surgeon is often obliged to restrain the physician in his desire for operation.

DR. PRICE: In my estimation, there is only one treatment for suppprative appendicitis. I do not mean by appendicitis simply irritation of the appendix, but I mean inflammation of the appendix going on to ulceration and rupture. One physician asserted, in the discussion referred to by Dr. Welch, that if all these cases were operated upon there would be 20 per cent. more deaths than at present. The operations of surgeons in this city will positively refute that statement. I can give a hundred cases, in the hands of a dozen men, with not more than ten or twelve deaths. An appendix operation has no business to kill, and the man who cannot find the appendix either does not know where the appendix is, or he has another condition, in which he has no business to hunt for the appendix. If there is an abscess at the head of the colon, with the peritoneum shut off, it should be opened, washed out, and packed, and the patient will get well. No effort should be made in these cases to find the appendix.

With regard to the symptoms of appendicitis, I think that they are plain. If in the first twenty-four or forty-eight hours you find a tumor, that is not appendicitis. An abscess of such size does not form in so short a time. There may be high temperature; that has nothing to do with appendicitis, necessarily. There is an impacted colon and something irritating the colon. The administration of salts, persisted in until free evacuation of the bowel is produced, often cures the patient. If called to a patient with symptoms of appendicitis and you administer a purgative, and, coming back after free purgation, you find the mass and swelling and the patient no better, you have a case of appendicitis every time; you have an abscess forming at the head of the colon. It is your business to cut down and drain that, and if you open the peritoneal cavity it does not matter. If you wash out the peritoneal cavity and put in a gauze drain the patient will recover. When you find a man with a pulse of 170, where a grain of opium, or two or three grains, an hour have been given, with all the symptoms smothered, with a mass in the right iliac fossa, and a temperature of 97°, respirations reduced to ten or twelve per minute, let him alone. Such a patient is beyond all possible chance of recovery.

We must recognize that all the troubles in the right iliac fossa are not appendicitis. Unless we have positive proof that there is trouble, we should not interfere.

In regard to Dr. Welch's cases. Patients do recover with abscess at the head of the colon; but is that treatment? Because now and then a man fails off a house and is not killed, it does not follow that that is a good way to get down. We have no business to call that treatment. It is our duty to do that which we find best for the patient, and not run the risk of having the abscess break into the colon or other viscera, and matting together of the bowels and crippling the patient for life. A short time ago I saw, in Albany, one of the cases which Alonzo Clark reported as appendicitis cured by opium. The man said to me that he had carried that appendicitis with him ever since. It ruptured into the bladder, and he passed feces for six months. Such cases as this are a proof that we should relieve these cases, and do it early, in order to avoid those fearful accidents which Nature in her attempt to save life, brings about.

I doubt whether Dr. Hoffmann's case was one of genuine appendicitis. There was trouble there at the head of the colon, with inflammation and tumor.

Dr. Musser had one of the most typical cases of appendicitis without rupture that I ever saw. The patient had had three or four attacks every year for several years. Dr. Musser diagnosed appendicitis. In all the attacks, except the last, the patient was relieved by free purgation. Dr. Joseph Price was then asked to operate. The history was clear, the appendix was large and distended with pus. The abdomen was opened and the tubes and ovaries found healthy. The appendix was not lherent and looked well. It was caught ith hæmostatic forceps and tied off. On ueezing the removed appendix the nasest pus could be squeezed out of it.

In the seventeen cases on which I have perated, I did not remove the appendix it twice. The trouble is, that we do too uch surgery. A surgical operation for is at the head of the colon, from any ause, if done in time, should not have 1 er cent. mortality. We have come to the point where there is but one obstructor in appendicitis cases, and that is the general practitioner consultant.

Dr. George I McKelway exhibited a

PORTABLE AND CONVENIENT FRAME FOR TRENDELENBURG'S POSITION.

Flatulent Dyspepsia.

℞	Bicarbonate of soda	gr. lxxv
	Prepared chalk	ʒi
	Powdered nux vomica	gr. xv
	Powd. red cinchona bark	ʒi

Make 20 cachets.
Sig.—One cachet before each meal.

—*Union Medicale.*

Liniment for Neuralgia.

℞	Chloroform	6 drachms
	Sulphuric Ether	1 ounce
	Spirits Camphor	3 ounces
	Tinct. Opium	1½ drachms

M. Sig.—Soak a small piece of flannel with the liniment, and apply over the painful part.

Cramps of the Legs in Pregnant Women.—Administer at bedtime five milligrammes of sulphate of copper. This can be administered every night without inconvenience. —*La Gazette Medicale.*

For the Night-sweats of Pulmonary Tuberculosis Dr. Ewart (*La Semaine Med in Med. News*,) suggests:

℞	Quininae sulphat,,	
	Zinci sulphat	ãã gr. ij
	Ext. hyoscyami	gr. j
	Ext. nucis vomicae	gr. ⅓

M.—Ft. pil. j. Sig.—Take at bedtime.

For Paralysis in Lead Poisoning.

℞	Potass. iodid.,	ʒij
	Ext. ergot fl.,	℥j
	Ext. nucis vom. fl.,	ʒj
	Tr. cardamon co.,	℥j
	Syrup, q. s.	
	Aquae, ad	℥iv

M. Sig.—Tablespoonful night and morning.

Diarrhœa.

Squibb gives:

℞	Tinct. opii	ʒii
	Tinct. capsici	ʒii
	Spr. camphor	ʒii
	Chloroform	m xv
	Alcohol	*ad* ℥ x

Sig.—Dose 20 to 40 drops.

—*College and Clinical Record.*

Carbuncle.

The following, says Buxton Shillitoe, will sometimes abort a carbuncle or boil if applied early:

℞	Extract opii	ʒss.
	Glycerinæ, q. s. nt. fiat. magma.	

M. Sig—Smear thickly over the swelling three or four times a day; then apply.

℞	Pulveris opii	aa ʒss.
	Unguenti hydrargyri	
	Saphonis duræ	

M. Sig.—Apply spread on thick leather.

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SATURDAY, JULY 1ST, 1893.

EDITORIAL.

DOES THE AMERICAN MEDICAL ASSOCIATION NEED A MEDICAL JOURNAL?

Within the past few years this question has often arisen, and it now recurs with emphasis greater than ever, since, in the latest issue of the *Journal of the American Medical Association*, the retiring editor attempted to make a plausible explanation for a very bad case.

When we behold the present strength and wealth of the *Journal of the British Medical Association*, we naturally inquire why America cannot maintain a journal its equal or superior. But if we consider for a moment and investigate, the answer is apparent. There is no analogy between the medical affairs of Great Britain and those of the United States. They, as a nation, have state medicine and we have not. England has no medical weekly of importance sufficient to compete with the Association's journal save the *Lancet*, while in America, there are at least a dozen journals of commanding merit. Over the ocean, the government is monarchial and paternal; tenure of office, private and public, has a stability and permanence quite impossible in a democracy.

Great editors are not born or made to order every day. It was only a Wakely who could found a *Lancet*, and before the fortunes of the *Journal of the British Medical Association* were placed in the hands of Ernest Hart, it had a precarious existence, and was given into his charge a forlorn hope. Moreover—there is no use of disguising it—the average respectable and influential American medical weekly is not in sympathy with the full development of the "association journal" idea. Editors and publishers know well that to make it in value and influence proportionate to the mighty nation which it should represent, would in one year, sink out of sight nine-tenths of the journalistic yield of this country. Doctors want to edit journals, and to own them too. Self preservation is one of the strongest instincts of human nature. Can such a journal be made powerful, prosperous and popular without disturbing the interests of vested rights?

It has been well known to those "behind the scenes" that the financial state of the *Journal* has of late been questionable; that in influence and importance it was ever becoming weaker and weaker, is evident to every one.

It may have been in questionable taste for Dr. R. Harvey Reed to have "let the cat out of the bag," yet as a member of the Business Committee he was bound to inform the rank and file of the actual state of affairs. That there was no justification for branding him "a liar, a crank and a fool," because he told the truth and sounded the warning note, is evident by the action of the trustees in retiring the one who employed this intemperate and harsh language.

IN MEMORIUM.—JAMES McCANN, M. D., LL. D.—1836-1893.

Was born fifty-seven years ago in Penn Township, Allegheny County, Pa. His father served under Anthony Wayne in the war for American Independence. In early boyhood he passed his summers working on his father's farm, and the winter months as a pupil of John G. Beatty, who taught him, in addition to the public school curriculum of that time, Latin and the higher mathematics. At about thirteen years of age his father died, when he began teaching school and became a leading member of a local debating society. Even at this early date he was a ready, fluent and earnest talker. Tiring of the monotony of country life, and like the majority of young men of his age, not knowing exactly what to do with himself, he decided upon a mercantile career, and at the age of eighteen came to Pittsburgh, where, after graduating at Duff's College, he spent several years as bookkeeper in a business house. This sedentary life became irksome to him, his health was not good, and acting upon the advice of his physician, who regarded him as a young man of promising talents, he finally decided to study medicine. With this object in view, he, in 1858, entered the office of Drs. Thomas and John Dickson, Sr.

He graduated from the Medical Department of the University of Pennsylvania in 1863, and immediately entered the medical service of the army as assistant-surgeon of the Fifth Pennsylvania Volunteers. He continued in this service until the close of the war, when he returned to Pittsburgh and began the practice of medicine with Dr. W. C. Reiter. Two years later he received the appointment of surgeon to the Marine Hospital, and the connection with Dr. Reiter was soon afterward dissolved.

He was next appointed one of the surgeons of the Western Pennsylvania Hospital, which position he held until a few months ago, when he resigned because of ill health, and accepted the appointment of consulting surgeon. For twenty years he has been one of the surgeons of the Pennsylvania, the Allegheny Valley, and other railroads entering this city.

He was an active and influential member of the Pittsburgh Free Dispensary from its inception, of the Board of Health for many years, of the Allegheny County Medical Society, of the State Medical Society, of the American Medical Association, of the American Surgical Association and of the American Association of Obstetricians and Gynecologists, but owing to ill health he was never able to attend a session of the latter.

In spite of the busy life he led, his ardent love and natural aptitude for teaching led him—in connection with his confreres of the "Mott Medical Club"—to undertake the arduous task of organizing the first medical college in Western Pennsylvania. Into this work he threw all his enthusiasm and devoted to it all his energy and influence. Caring but little for pecuniary reward it was with him a labor of love. In September, 1886, after years of weary and distasteful work, the culminating point of his ambition was attained by his election to the chair of Professor of the

Principles and Practice of Surgery. This position, notwithstanding his failing health, and in defiance of bodily suffering, he filled until a few months prior to his death. At last, his physical endurance being exhausted, his grateful and sorrowing colleagues unanimously nominated him for appointment as "Emeritus Professor," a last tribute to his eminent worth and ability, but before this action could be confirmed by the board of trustees of the University, death had claimed him as his own.

He died a martyr to his profession—a sacrifice upon the altar of charity. His love for it and devotion to it was the direct cause of his death. He performed an enormous amount of work, and it was in the performance of a surgical operation, a work of charity in the Western Pennsylvania Hospital, that he received the fatal shaft from the quiver of the fell destroyer. Had he, like many others, turned aside from charity work and devoted himself strictly to his lucrative clientele, he would be living to-day.

He never ceased to be a student. He was too broad-minded to make a successful specialist. His mental attainments were too great, his studies and reading too comprehensive, his ambition too high for any single department of his profession to permit free scope to his talents. His mind was alert to grasp and tenacious to retain knowledge, which enabled him to easily keep pace with progress and improvement, however rapid, in every department of medical science.

He stood in the front rank of the leaders of the profession. His *savoir faire,* his strong personal individuality, his impulsive and generous nature won him a host of friends in and out of the profession.

His reputation and practice were not limited to his own city, county or State, but were national. His life was one of unceasing toil. There are but few surgical operations that he had not performed. His profound knowledge, rather than his personal magnetism, made him popular with all the members of the profession with whom he came in contact, making him eagerly sought as a consultant, and he never betrayed this trust.

He followed, as strictly as the present state of society will, perhaps, admit, the axiom, "a physician's first duty is to his patient, his second only to himself."

He was in the active practice of his profession from 1863 to 1893—a period of but thirty years, yet in those thirty years he accomplished, perhaps, a task as great, and fulfilled a destiny as rounded and complete as the average practitioner of fifty years standing. A man's life is measured by his works. Judged from this standpoint, although he was but fifty-seven years of age, his death was not premature.

He had faults, but no vices, and his virtues were too many to dwell upon at greater length. By his death his wife loses a loving husband, his children an affectionate father, his colleagues a genial companion and true friend, and his profession a devoted follower. *Requiescat in pace.*

W. SNIVELY,
J. B. MURDOCH,
C. B. KING,
Committee of Faculty,
Western Penn'a Medical College.

PITTSBURGH, June 19, 1893.

Morphine and Gastric Secretion.

Hitzig has noted that morphine administered hypodermicly to a dog is shortly afterward excreted by the stomach, and that, following upon this, there is a marked reduction in the amount of gastric juice secreted, and more especially of its acid constitutant. The cessation of the action of the drug is followed by the secretion of excess of hydrochloric acid. With regard to the effect upon human gastric juice, the case is described of a patient who consumed daily two grammes each of morphine and cocaine, the latter having been resorted to in an endeavor to remove the craving for the morphine. He was treated by gradual reduction of the doses of the alkaloids, but it was not until the morphine was entirely discontinued that the presence of free hydrochloric acid was indicated (*Neur. Centr., B. M. J. Epit., 1671,4*).

"What did de doctah say ailed yer mostly, Bill?" "He 'lowed dat I had a conflagration of diseases. Fust, de salvation glan's don't insist my indigestion; dat makes a torpedo liver, cose I'm liable to go off any minute."

CORRESPONDENCE.

PRESIDENT ROBERTS AND HOMŒOPATHY.

In the Reporter, of May 27th, appears the annual address of Dr. John B. Roberts, President of Philadelphia Co. Medical Society, entitled "Points of Similarity between us and Homœopathic Physicians." President Roberts deserves thanks, and thanks with a big T, for the able manner in which he has handled the subject regardless of the title; it is a masterly exhibition, or even exposé, of the position of the Sectarian Brethren as they are today. For the charming scholarly style in which the subject "is done," the Doctor "takes the cake," and deserves the whole bakery. Dr. Roberts might have gone still farther in his investigations and told "us" of "the Points of Similarity," at the *starting point,* between "us and Homœopathic Physicians."

For instance, regardless of his choice of school, the average student starts in with very little general information about "men and things," and none whatever, of the subject of his choice. He steps into the field, not to investigate but to follow a beaten path, and is ready to believe all that is taught him. If he chooses a Homœopathic School, he is ready to believe that "Regulars," styled "Allopathists," are little short of antiquated, dough-headed murderers, who treat patients according to the rhyme:

> "I purges, I pukes, and I sweats them,
> Then if they die, I lets them."

He is ready to believe that in accordance with "Similia Similibus Curantur" theory the administration of gold will cause a man to be avaricious, and the administration of sulphur cause a man to despair of his eternal salvation, and even long for the "Lake of Fire and Brimstone," if given in sufficient doses; while the proper attenuation of the same will chase out the despair and raise a camp meeting feeling in his bosom. If he sups with the "Eclectics," he has no difficulty in swallowing the "Pap" that both Regulars (here also styled Allopathists) and Homœopaths, are following a metallic route to perdition, and that Eclectics alone "select" their remedies from all proper sources. If he goes to the "Regulars," he is fully capable of taking in, without an effort, the doctrines that Homœopaths and Eclectics are "Ignorant Heretics," to be classed with "Quacks and Tramps." Just in accordance with the class of Professors he falls in with, will he be filled up, more or less, with the gall and bitterness of adverse criticism. So he goes out into the world, armed, he thinks, against both disease and professional foe. The world into which he goes, knowing just as little of the science of medicine as he did a few months ago, hears his ranting and raving, breaks into factions, and believes or disbelieves, some from ignorance, and some from pure cussedness.

Another "point of similarity" the Doctor might have mentioned is the ignorance of the average practitioner of either school of what is taught in the adverse school. Now, as the value of one's opinion, on a given subject, is just in accordance with the perfectness of one's knowledge of the subject, it follows that most of the time neither party knows what they are talking about. Hence, it becomes a sort of "You're a liar" and "You're another" kind of an argument, while the outsider looks on and grins. In view of all this, Dr. Robert's paper is most timely; it shows that the Homœopathic people are coming around to rational medicine because it is rational. He shows that a few, only a few, play Hahnemann, with Hahnemann as the principal character. That many, very many, are content with only a recognition of him as "a has been." The picture is as bad as the "play of Hamlet, with Hamlet left out," and content that the ghost of his Father is left in.

The Doctor's "investigation" is intended by him to illustrate his position, that membership in a regular medical society ought to be open to this class of physicians. He accords, and justly so, to them "courtesy, refinement and large hearted charity." In a communication of mine, published in The Reporter of February 23rd, 1889, I used these words: "We must recognize that there are just as true gentlemen, loyal citizens and Christians practicing in the other schools as in our own." We can all, at least, respect the Sectarian, who is honestly practicing his belief, just as one can respect a fellow regular whose idea of treatment may differ radically from one's own. Unless, indeed, it is that class, few in number I am glad to say, who still calling themselves "regular," assume the,—"Treat you either way" dodge. A sort of—"you pays your money and takes your choice"—game of therapeutics. No one respects them, though sometimes they are of more than average ability. One of the brainiest practitioners, of my knowledge, in Western Pennsylvania, does all that, and more too, for he poses thusly: "Catharsis, Allopathic, Emesis, Homœopathic, see? so I use a double system, one acting well, upwards, the other acting well, downwards, result, perfection, see?" *Of course*, the patient sees, *they always do,* when that sort of thing is done impressively, and the double system doctor pockets good fees. I don't think Dr. Roberts would care about him, though, in a "regular" way.

While I do not intend this as an illustration of the class of physicians President Roberts presents in his paper, yet I do say that this paper causes one to reflect, thoughtfully reflect, on his *facts* and suggestion in this way, viz: "*Is it honest* to cure diseases by non-Homœopathic methods and contrary to Homœopathic law, and yet *claim Homœopathic credit for the result?* *Is it honest* to admit that "had not our school drifted away from the practice of forty years ago, it would have been dead and buried long since," and yet give that *same law of cure* of forty years ago, the credit of what that school does by *rational methods* and *regular school therapeutics* to-day? *Is it honest* for a school that uses as "Text Books—the U. S. P.—Woods Therapeutics—Pepper's System of Medicine," as well as those by "Gross, Agnew, Playfair, etc.," to be posing as teaching according to Homœopathic law? "Pepper" recommended as a "Text Book" by "Hahneman College" is enough to cause the shade of the Apostle of Homœopathy to shed bitter tears, even though the "Pepper" wasn't *re*(*a*)*d*. That somewhat salty sentence rolled out from my pen before I really caught on to it myself, and it wasn't intended as a *dry* joke either. *Is it honest* for a school to use the brains, scholarship and text books of rational medicine, and at the same time refuse to sit on an Examining Board with that scholarship and examine on those text books? Use the books for the student, and yet insist on *examination* according to *Homœopathic Law*. *Is it honest?* If it is, then my very good friend Dr. Roberts is right, and we should open the doors of our societies and bid them enter. If it is not honest to forsake the substance and claim credit for the shadow; if it is not honest to forsake Homœopathic Law, while claiming credit for "Similia Similibus Curantur" (as every one who still clings to the name does) then the door should be shut. There is no doubt but that a very large portion of the regular profession are willing to sit down and exchange, gladly, specimens with Homœopathic physicians where sectarianism is by them set aside. Is it not asking too much to throw open the doors of rational medical recognition to gentlemen who while "*practicing it, deny the faith.*" Dr. Roberts is such a genial, good hearted man, to say nothing of his sterling professional qualities, that the Homœopathist who would not *want to consult* with him would be "hard-hearted and white-livered" indeed, and the doctor is just enough and broad enough to be willing to help even a "Thompsonian" to improve his "number six." However, would it not be as well to wait until the gentlemen of "Similar Points" get to the broad "Similar Point" that Dr. Roberts has reached, and *want to come in*. I am sure that they can, just as soon as they reach a "Similar Point" of being not sectarian, but Fellow Craftsmen for the *common good*.

In the meantime I think the position of the regular profession towards Dr. Roberts' paper will be this "That we thank him for the publication, for its information and general blessedness, regardless of his suggestion."

S. S. Towler, M.D.,
Marienville, Pa.

Purulent Cystitis.

℞ Iodoformi pulv.,
Mucilag. acaciæ,
Glycerini puri,
Aquæ destill.—M.

Sig.—After washing out the bladder about five drachms of this combination is injected and allowed to remain for fifteen minutes.

THE LIBRARY TABLE.

BOOK REVIEWS.

A Standard Dictionary of English Language. Funk & Wagnalls Co., 18 and 20 Astor Place, New York.

We have examined the sample pages of the "Standard Dictionary" and are convinced that the work will prove of invaluable service, and will take a place in the highest ranks of works of the kind. It contains the best points of most other similar works with some distinguishing features of its own of greatest value. Among them, we note first that the etymology of words is placed *after* the definition, that in the definition of words the most common meaning is given first, which is the order of practical common sense. That in the pronunciation of words, the scientific alphabet recommended by the American Philological Association is used. That the quotations used to verify or illustrate the meaning of words are located by author, book, page and edition. That disputed pronunciations and the spellings are so given as to furnish a consensus of the best judgment of the English speaking world on all disputed words. That a serious and successful attempt has been made to reduce to a system the compounding words. That obsolete, foreign, dialetic slang words are given places only to be sought for in a general English dictionary, while the vocabulary is extraordinarily rich and full, surpassing any other dictionary.

A marked feature is the pictorial illustrations, nearly 5000 in number, including several full page groups in colors made in the highest style of the art by the Messrs. Prang.

We note the editorial staff comprises a number of the most eminent specialists in their various departments, and their work seems to be extraordinarily well done. For instance, in all matter pertaining to our medical profession, the dictionary is full, accurate, and up to date. The features of this dictionary will commend it to students and scholars. The work will prove of superior convenience and includes an extraordinary amount of material not found in the ordinary dictionary, and will quickly become the "standard" in reality as well as in name.

The Surgery and Surgical Anatomy of the Ear. By Albert H. Tuttle, M. D. *Physicians Leisure Library,* Geo. S. Davis, Detroit, Mich., 1893.

Works like this one should be of immense value to the busy surgeon, as it furnishes in a reliable and compact manner, the topographical landmarks of the temporal bone after giving us five chapters, four of them clearly describing the surgical treatment of the ear, beginning with the external canal and concluding with the brain lesions so often resulting from diseases of the middle ear. The first chapter is devoted to the anatomy of the ear. In describing the diseases of the external canal, the author does not mention atresia of the canal, a condition by no means rare and calling for surgical intervention. He very wisely considers suppurative inflammations of the brain and its meninges, except those of tuberculous or traumatic origin, to be associated with middle ear disease. In the chapter on the mastoid and its operations, the author considers Schwertze's indications, eight in number, as the most valuable in determining the advisability of an operation; early operation is advised in all cases as tending to lessen the inflammatory process and rarely terminating fatally if early performed. Dr. Tuttle also furnishes a ready means of refering to the literature of many authors on the anatomy and surgical treatment of the ear.

The scholarly presentation of this little work should make it welcomed both by the general surgeon and aurist; it is, however, for its sections of the temporal bone and topographical description that Dr. Tuttle has furnished us so reliable a guide. It may be said of this little work, that it embodies in a condensed form a large part of the most recent contributions on the surgery of the ear.

The Diseases of the Nervous System. By Dr. Ludwig Hirt, Professor at the University of Breslau. Translated with permission of the author by August Hoch, M.D.; assisted by Frank R. Smith, A M. (cantab), M.D., with an introduction by William Osler, M.D., F.R.C.P., Professor of Medicine in the Johns Hopkins University, etc. With 178 illustrations. Pp. 683., New York: D. Appleton & Co., 1893.

In his "Introductory Note" to this English translation of Professor Hirt's valuable work, Dr. Osler informs us that the idea of having it translated was due to Dr. Weir Mitchell calling his attention to its exceptionally good arrangement and thorough description of the nervous system, and all who read this translation must duly appreciate the appearance of another work which manifests so large an amount of research and personal observation in this class of diseases.

The book has three principal divisions: (1) Diseases of the Brain and its Meninges, including those of the Cranial Nerves. (2) Diseases of the Spinal Cord, and (3) Diseases of the General System.

After treating of diseases of the meninges of the brain, no less than 128 pages are devoted to a lucid and comprehensive description of the diseases of the cranial nerves. The author does not discuss one here, one there, and the peripheral nerves of the spinal cord partly in one place, partly in another, according as he is dealing with their motor or their sensory disturbances, but he speaks of the former and of the latter in the order that their anatomical position would indicate.

A somewhat novel arrangement of the subjects dealt with has been adopted. For instance, tabes dorsalis and dementia paralytica are placed among the diseases of the general nervous system, instead of in the sections on diseases of the cord and diseases of the brain respectively. As Dr. Osler justly remarks "the fact which makes the work of value to the teacher, the student, and the practitioner is the graphic description of the anatomy and symptomatology of the different diseases. Where all is so good it is invidious to select, but the chapter on tabes is an illustration of our author's lucid and, at the same time, thorough treatment of his subject." Whilst believing that it is possible to cure tabes of lentic origin, he concludes the question of prognosis by saying "On the whole, one can say that out of 250 tabetics one has a chance of regaining his previous health."

As to therapeutics, he considers that although syphilis is at the bottom of many instances of tabes, an anti-syphilitic treatment is only admissable in a very small number of cases. Of internal remedies, silver nitrate, ergotin and physostigmine have the preference, in addition to which electrical treatment may yield excellent results in recent cases. He speaks most favorably of the excellent general faradization advised by Beard and Rockwell, and the faradic brush applied to the back as recommended by Rumpf.

In a large number of cases the cold water treatment has been found extremely beneficial, but he emphatically warns the practitioner against the use of warm or hot, as well as steam and sweat baths. The results of massage, he says, are not satisfactory and in relating his experience of the "Suspension" treatment of 115 patients, he states that in no single instance was he able to note any marked or lasting improvement, and the impression which he himself has gathered is, that "suspension" will be in vogue for a time, only to fall again into complete oblivion. The same candid spirit pervades the expression of opinion as to the use of remedies in other diseases of the nervous system. The treatment of myxœdema is omitted, this apparent omission is probably due to the fact that the original work is now four years old.

The excellent illustrations, which are most of them new, faithfully elucidate the text and greatly add to the attractiveness of the work. We regret that our space will not permit us to dwell further upon its contents, but we confidently recommend it to the practitioner as a faithful guide in the study and treatment of nervous diseases.

Materia Medica and Therapeutics. In two vols. By Jno. V. Shoemaker. The F. A. Davis Co., Publishers.

Of books on therapeutics there seems to be no end. A book that meets a want or fills a place in medical literature should either say something that others do not say, or should say she oft repeated in much better styyje than has been done by anyone else. This work does neither, therefore, it does not fill a long felt want. If we did not have two or three very excellent works on this subject, Shoemaker's book might be hailed as a valuable tontribution. But the market is glutted with two very able English works and two most excellent American ones. It is true this work is not without some excellent points; yet it blemishes far outnumber its good qualities-

The great value and importance of the imponderable agents such as heat, electricity, hypnotism, massage, rest and the like are very ably, fully and clearly set forth in the first volume, and if the auther had stopped with the first volume his work would have been both unique and useful. The second volume is taken up with drugs and their application.

Due attention is given to the new remedise such as the coal tar preparations. Animal extracts are not even ignored. For this Dr. Shoemaker deserves great credit, but in the discription and application of the more familiar remedies there is too much accepted from others and too little of the author's own experience to give an air of authority to what is said. When antipyrine is recommended for typhoid fever, one is prone to look upon the work as an unsafe guide to the inexperienced.

For the beginner, the work is not practical enough, and for the experienced and scientific physician there are other books that are much better for his library or office table. It might pay any one to purchase the first volume, but the second one would last a long time in the hands of even the most omnivorous reader.

CURRENT LITERATURE REVIEWED.

THE AMERICAN JOURNAL OF OBSTETRICS for June. Dr. Paul F. Munde contributes an article on

Abdomino-pelvic Fistula after Celiotomy and Laparotomy; its Prevention and Treatment.

The author comes to the following conclusions:

1. The formation and persistence of abdomino-pelvic sinuses after celiotomy and laparotomy should be prevented by all the means at our disposal.
2. Such sinuses cannot always be prevented, no matter how careful we are.
3. A certain number of early, moderate cases may heal under appropriate treatment, and even a few old cases may recover after operation.
4. Celiotomy, or the opening of the abdominal cavity, is usually not necessary or beneficial in treating these sinuses, unless it

can be distinctly shown or suspected with good reason that the focus of suppuration can be reached only in that way.

5. Through drainage into the vagina, whenever practicable, forms the best method of curing deep sinuses.

6. In some cases, where the other methods, medical and surgical, have failed, and where the general health is fair and the sinus gives but little inconvenience, it is justifiable not to subject the patient to the risks and uncertainty of an abdominal section (celiotomy), but to advise her to "let well enough alone" and keep her sinus so long as she can live comfortable with it.

Dr. Andrew F. Currier contributes a paper on "Septicemia and its Treatment with Oxygen." The author reports two cases, in one of which it was believed that the oxygen repeatedly warded off impending death. In the second case, while it is believed the oxygen delayed the fatal issue, it was powerless to overcome the advancing sepsis. The only ill effect which the author has ever seen in its use, consists in pain referred to the region of the stomach, probably due to swallowing the oxygen, which may have been administered under too great pressure.

Dr. Charles J. Cullingworth discusses the subject of

Retention of Menstrual Fluid, in Cases of Bicorned Uterus, from Uni-lateral Atresia of Uterus or Vagina.

The author reports a case where the tumor was thought to be a suppurating cyst outside the uterus and a section undertaken for its removal. At the operation, the true condition was discovered and the retained fluid evacuated *per vaginam*. The author states that it would have been impossible to have arrived at a correct diagnosis without abdominal exploration. The two great dangers of the vaginal evacuation of the retained fluid are septicemia and the rupture of a distended Fallopian tube. Both dangers can be overcome, the former by strict antisepsis, and the latter by slow evacuation of the accumulated blood, so as to minimize the risk of exciting reflex muscular contractions. In the event of a rupture of a tube, the abdomen should be promptly opened, the peritoneal cavity cleansed, and the ruptured tube removed. The report includes a number of similar cases reported by other observers, and is illustrated by a cut representing the malformation described in the paper.

Dr. H. J. Boldt discusses

The Operative Treatment for Myo-fibromata of the Uterus.

He states that he has been unable by means of electricity, to diminish the size of the tumor in any case, though in a number of instances the symptoms caused by the growth have been relieved—that is the pain and hemorrhage; in others again, the treatment was not only negative, but the patients gradually became worse. He would however, sanction operation in cases of ordinary interstital growths, only after the current had been tried. He warns against the danger of producing suppuration in the tumor by means of the current. If a myomatous uterus in small enough to be removed per vaginam *in toto*, vaginal hysterectomy then is the operation of choice, provided other measures fail of relief. If an abdominal operation is necessary, the neoplasm should be removed by enucleation, when possible, the bed being sewn up with buried catgut sutures. Constricting the cervix with an elastic suture during enucleation he regards as bad. When the body of the uterus must be removed along with the tumor, no method of treating the stump has given as good results as the extra-peritoneal. Personally however, he favors the intra-peritoneal method, and regards Martin's method as ideal. He uses nothing but catgut for the suturing and tying, except in closing the abdominal incision. In the intra-peritoneal treatment, secondary hemorrhage plays an important role in causing death. This need not be feared if the ligatures are properly placed in complete hysterectomy. The main cause of death in complete hysterectomy is shock or extreme anemia, and for that reason he has not entirely given up the extra-peritoneal treatment. The paper gives the report of twenty-one cases operated upon.

Dr. R. Stansbury Sutton discusses the

Elastic Ligature in Supra-vaginal Hysterectomy.

The author prefers the extra-peritoneal treatment of the stump because statistics show that this is the better method. The author regards rubber as the ideal substance for the composition of the constrictor for the compression of such tissue as the cervix. He has abandoned the wire nœud on account of the danger from hemorrhage unless the wire is constantly watched and tightened. The rubber constrictor is turned twice about the cervix, underneath the transfixing pin, secured by a double knot, behind which a heavy silk ligature has been securely tied, and closely in front of which a pair of lock-handled forceps grasps the free ends of the ligature. This method is safe against hemorrhage under all circumstances. There is no depending upon an assistant, nurse or self to tighten the ligature; it follows up the shrinking pedicle painlessly and effectually. The primary dressing may remain on the pedicle from nine to thirteen days without any disturbance whatever. During the three years in which he has used this ligature, he has not found a single objection to it, and his hysterectomies have given him no more trouble than his ovariotomies. The paper is illustrated with cuts showing the method of applying the ligature.

Dr. Howard A. Kelly describes what he considers to be the "Best Needle Holder," giving a cut of the instrument described.

Dr. Henry C. Coe discusses the "Internal Migration of the Ovum," reporting a case of repeated ectopic gestation possibly supporting the theory. The paper is illustrated with a cut showing the conditions described in the paper.

This issue also contains the address of Professor Theophilus Parvin to the American Gynecological Association, in which the author urges the necessity of the chairs of gynecology and obstetrics in our colleges being filled by one man and not divided as is the usual custom. This number concludes with a memorial notice of the late Dr. Charles Carroll Lee.

LANPHEAR'S KANSAS CITY MEDICAL INDEX for June. Dr. Frederick P. Henry contributes a paper on the

Treatment of Pulmonary Tuberculosis.

Cod liver oil is given the first rank in the remedies advised by the author. Cod liver oil cannot be retained, or if retained is of very little value, in the cases with febrile symptoms. In such cases, he advises the use of morrhuol. Another drug that is useful is arsenic. Alcohol he considers of doubtful value, though it is possible that, in moderation, it may favor the cicatrization of tubercular deposits in cavities. He is of the opinion that the hypophosphites of soda and lime possess no advantage over the phosphates, as they probably undergo oxidation in the stomach. Glycerin may be prescribed in place of cod liver oil to those with whom the oil does not agree. Iron is advised for the anæmia that so constantly accompanies phthisis, but the author thinks that it is of no use when there is febrile movement. In afebrile cases, it may assist greatly in maintaining the general state of nutrition. For the cough, he considers hydrocyanic acid to be one of the best drugs and, when this alone will not suffice, a little morphia may be added. Iodine, carbolic acid and creasote, by inhalation, are of service in allaying the cough, as is also the well known solution of Dobell. For hæmoptysis, the drugs on which most reliance is to be placed are ergot, sulphuric and gallic acids. The old-fashioned remedy of salt he has also found useful. Dry cupping of the affected side and hot foot-baths are useful as derivatives, and, if the bowels are constipated, a purgative should be administered. Night-sweats are controlled by means of atropia. He has used picrotoxin, though of late he has used agarcin with much benefit and speaks highly of it. It should be given in doses of one-tenth of a grain, combined with a grain or two of Dover's powder.

Dr. M. B. Ward, in an article on "Pyometra," reports a case in which operation was refused by the patient till in extremis. At the section the uterus was found to be completely necrosed, with the walls as thin as paper. Total extirpation of the uterus was performed but the patient died. Hysterectomy he regards as the only treatment for the condition.

Dr. Edward A. Lee, in an article entitled "Preventive Treatment after exposure to Gonorrhœa; and Treatment of the Disease," advocates the irrigation of the urethra for two or three minutes at a time, and repeated once or twice, with a bichloride solution of 1-10,000, or 1-20,000. At the same time, the glans-penis, prepuce and body of the organ should be bathed in the same solution, or one of 1-6,000 or 1-8,000. This, he states, will prevent many cases from developing, provided they be seen within a few hours after exposure. After the disease has been in progress for two or three days, he prescribes salines and copaiba, internally, with injections of bichloride 1-10,000 or 1-20,000 repeated three times a day and followed immediately by the injection of a solution of sulphate of zinc with bismuth.

Dr. J. F. Binnie contributes a paper on "Gradual Auto-inoculation as a Factor in the Production of Immunity from the Effects of Septic Infection."

Dr. Emory Lanphear reports a "Case of Sacro-iliac Disease with Immense Distention of the Abdomen with Pus—Laparotomy—Cure." The remaining articles in this issue: "A Method of Operating About the Face by which but Little Blood Enters the Mouth," by Dr. W. W. Keen; "Amputation at the Hip-Joint—Tumor Near the Sub-clavian Vessels—Operation on the Fifth Nerve," by Dr. John B. Deaver; "Metatarsalgia (Morton's Painful Affection of the Foot)," by Dr. S. K. Morton; were read at the meeting of the Philadelphia Academy of Surgery on March 6th, 1893, and appeared in the MEDICAL AND SURGICAL REPORTER for May 13th, 1893.

NEWS AND MISCELLANY.

American Electro-Therapeutic Association.

The third annual meeting of the American Electro-Therapeutic Association will be held in Chicago, September 12, 13 and 14, at Appollo Hall, Central Music Hall Block.

Members of the medical profession interested in Electro-Therapeutics are cordially invited to attend.

AUSTIN H. GOELET, M.D., Pres.
MARGARET A. CLEAVES, M.D., Secy.

ARMY AND NAVY.

U. S. ARMY FROM JUNE 17, 1893, TO JUNE 24, 1893.

An army retiring board having found Major John O. Skinner, Surgeon, incapacitated for active service, the extension of leave of absence on Surgeon's certificate of disability, is further extended until further orders.

Leave of absence for two months, to take effect on or about July 15, 1893, is granted 1st Lieutenant Benjamin Brooke, Assistant Surgeon, U. S. Army.

Leave of absence for one month and twelve days, from August 1, 1893, is granted Captain Charles E. Woodruff, Assistant Surgeon.

1st Lieutenant Harry M. Hallock, Assistant Surgeon will, on July 6, 1893, proceed to Griffin, Georgia, and report to Captain George G. Greenough, 4th Artillery, for duty in connection with the encampment of State troops at that place.

1st Lieutenant, J. D. Glennan, Assistant Surgeon, now at Fort McIntosh, Texas, will report to the commanding officer 3rd Cavalry, to accompany Troop I of the regiment to Fort Sill, O. T.

THE

MEDICAL AND SURGICAL

REPORTER.

No. 1897. PHILADELPHIA, JULY 8, 1893. VOL. LXIX—No. 2

ORIGINAL ARTICLES.

THE PALPABLE AND MOVABLE KIDNEYS.*

PAUL HILBERT.

During the year 1889, Israel called attention to palpation of healthy and diseased kindeys, placing stress upon those methods which give definite ideas about the size, the form and position of the kidneys under normal or abnormal conditions. Palpation of the kidneys is performed with both hands, the patient either standing, lying on the back, side or knee-elbow position. As a rule, the back is preferred by both patient and doctor. In palpating the right kidney, the physician stands to the right of the patient, the left hand under the loins immediately behind the last rib, while the right hand, placed opposite the anterior surface, exerts a gradually increasing pressure. In this manner the organ is frequently brought between the fingers of both hands. If this method cannot be carried out successfully, the examination on the side is the next preferable, or the patient may be examined standing, the body slightly bent forward.

Israel has concluded from his studies that every kidney can be partially or en- ely palpated, and recognizes a motion uced on the normal kidney by the res- atory movements.

Kuttner, under the direction of Ewald, the polyclinic of the Augusta Hospital, Berlin, made a careful study of this ject and, in the course of eight months, had collected one hundred cases in which the kidneys could be palpated. In opposition to Israel, Kuttner maintains that every kidney which shows in palpation a tendency to motion during respiration should be regarded as pathological. In order to aid in deciding this question, the author has made a careful study of one hundred cases, giving a table which represents the grade of mobility, and if right, left or both were affected. He defines the three grades of mobility as follows: First grade of mobility: the lower portion of the kidney can be felt to about its middle. This he names ren palpabilis.

Second grade of mobility: the entire kidney can be felt between the fingers, known as ren mobilis.

Third grade of mobility: the entire kidney can be felt and pushed upwards at will, and he names this ren migrans.

This classification may lead the reader to think that the author regards the floating kidney, or ren migrans, as the highest grade of movable kidney, which, with truth, may be accepted, not, however, in the sense of Litten, who believes that the floating kidney is always of congenital origin; this view has never been demonstrated with certainty, either clinically or anatomically.

It is a well-known fact that movable kidneys occur more rarely in men than in women; this is also true of the first grade in the classification. In order to prove this, the author states that he served for

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lecture read before the Society of Wissenschaft- e Heil in Konigsburg i. Pr. Translated by M. B. NER, M. D.

more than a year in the polyclinic on the male side and found but few cases of palpable kidney.

The hundred cases which I have collected have chiefly occurred among women. The frequency in which palpable kidneys can be found among women is shown by the fact that the first fifty cases were seen during the space of two months (May 28 to July 28, 1890); during this time 435 women were treated at the Polyclinic. The author was able to examine but half the number, say about 200 to 250, which has led him to conclude that palpable kidneys among women stands as 1 to 5.

The recognition of the first classification, rens palpabilis, can be aided by inducing the patient to take deep respirations. During inspiration the kidney usually descends and then can be easily felt by the examining hand, while during the act of expiration it ascends beyond reach. This mobility during respiration of a normal kidney the author has felt distinctively 95 times, twice in a lesser degree and three times it was impossible to feel it. He, for that reason, is inclined to believe with Israel that the respiratory movement of the kidney is physiological and not, as Kuttner insists it to be, pathological.

In the 100 cases examined, 65 were found of the right kidney, and 35 cases in which both kidneys were palpable. Forty of the 65 belong to the first grade, 25 to the second grade. The first grade of mobility was found in both kidneys 8 times, and 9 times of the second grade. In 17 cases the entire right kidney could be felt, while the lower portion of the left could be barely outlined. There was but one true case of floating kidney among the hundred. In this patient the left kidney was easily palpable.

In all these cases there were none found in which the left kidney was alone displaced.

The author has added a table in which he has particularly studied the age of the patient and the three classifications. This table states that in patients between the years of 20 to 40 the kidneys are most easily palpable; that they occur most among women who have never been pregnant. These statements coincide with those of Kuttner. In all cases an examination of the urine for albumen gave the following results: in 9 cases there was but small amount of albumen present; in 5 larger amount. This makes about 14 per cent. of the cases which contain albumen, and in comparing with other patients at the Polyclinic suffering from other diseases than that of the kidney, the author drew the following conclusions:

That abnormal motility of the kidney will produce pathological changes and secretion of urine which may lead to albuminuria.

One patient with ren mobilis of the right side and ren palpabilis of the left side presented, aside from the symptoms of acute nephritis and large quantities of albumen in in the urine, cylindrical casts and blood. The author was unable to find any changes in the form or consistence of the kidneys after the patient's recovery, such as have been observed by Litten and Israel. The author cannot add anything new to the causes which can lead to greater mobility of the kidney. Repeated pregnancies can only, in his estimation, produce as much influence as Landau assumes. Frequently carrying heavy loads or curvature of the spine has been regarded as a cause for dislocation of the kidneys.

The author found in 8 cases a descent of the lower anterior border of the right lung; the same existed of the liver in 4; inguinal hernia in 2; prolapsus of the vaginal walls once. In three women it was possible for him to locate by palpation both kidneys, liver and spleen, although there was no enlargement of any of the above-named organs. In two of these he found, in addition, a large prolapsed stomach reaching below the umbilicus. These cases may be classed, in all probability, with those described by Glenard under the name of Enteroptose.

Bartels and Muller-Warnick have described the connection between movable kidneys and diseases of the stomach; explaining their theory that by traction of the movable kidney, a compression of the duodenum, and through this dilatation of the stomach. Litten has explained it in the opposite, declaring that the dilatation of the stomach is the primary affection, while the dislocation of the kidney becomes secondary. These theories have, however, become questionable, and Litten has forsaken his theory entirely. Kittner, on the other hand, has called attention to the frequency of the presence of enlarged and displaced stomach in connection with movable kidneys, claiming that in 89 cases in which he distended the stomach, he found an enlargement, perspectively a prolapsus, 79 times. This number seems to the author to be questionable, since, among his 100 cases, in which he frequently made use of distending the stomach, he found but 17 in which he could demonstrate enlargement or prolapsus. A question now comes—if and how much pathological importance can be attached to the palpation of kidneys?

In order to arrive at some definite conclusions, the author studied, in each case very thoroughly, the subjective as well as objective symptoms. After the diagnosis had been made, seven patients were found who had suffered absolutely from the mobility of the kidneys; 8 in which other diseases were present, anemia, tuberculosis. etc., who complained, however, subjectively, only of the movable kidney. This brings the percentage down to 15.

It has been known for some time that floating kidney, or even the second grade, ren mobilis, may give rise to serious changes, either by dragging on the ligaments or by flexure of the vessels or ureters. The author does not conclude that these conditions arise from pathological changes, but that the cause may be sought within the physiological boundaries which often cause abnormalities.

Therapeutically the author recommends certain bandages, or a corset extending to the pubes, which will in a measure produce artificial abdominal walls.

CLINICAL LECTURES.

QUINSY OR PERI-TONSILLAR ABSCESS AND ACUTE FOLLICULAR TONSILLITIS; THEIR DIFFERENTIAL DIAGNOSIS AND TREATMENT.

DR. GEORGE M. LEFFERTS.*

GENTLEMEN:—When a sore throat is due to a phlegmonous inflammation it attacks the tissues somewhere about the tonsil, but not the tonsil itself. Here at once we strike at the root of the popular idea that in quinsy sore throat the abscess occurs in the tonsil. It does not. In quinsy sore throat, the favorite seat of the phlegmon is in the tissues just in front, just above and to the outer side of the tonsil; or, in other words, just behind the anterior pillar of the fauces. The phlegmon, starting in this locality, invades the tissues about the tonsil—the anterior pillar of the fauces and the connective tissue behind and above the tonsil. Its next ost frequent locality, but much more re than the other, is behind the tonsil the posterior pillar of the fauces. In e connective tissue of this part the phlegon makes much slower progress and is ver as large as in the first form. There ill be œdematous infiltration and swellg, and the phlegmon will extend down the lateral pharyngeal wall, and it may eventually point as low down as the mouth of the œsophagus, the last place you would look for it to point. The third form is the still more rare. Here the phlegmon locates itself in the groove behind the tonsil, between the two pillars of the fauces. Here also the phlegmon has nothing whatever to do with the tonsil, but the abscess penetrates into the tonsil and opens into one of its crypts. Such an abscess will discharge itself unexpectedly, and you may never know where it was located or how it discharged itself. This phlegmonous inflammation will probably locate itself in eighty per cent. of the cases in the first locality mentioned.

These are the three localities in which you will find a peri-tonsillitis. In the case before us, the phlegmon certainly looks as if it were in the tonsil, for the tonsil is displaced and swollen, but in reality it is a case of peri-tonsillitis.

Now, ordinarily, the exciting cause is a cold, and the predisposing causes are just such large, ragged, irregular tonsils as you see in the drawings before you. The open mouths of their crypts seem to invite infection. In perhaps eight cases out of ten, the rheumatic diathetis will be the predisposing cause. I know very well that there are cases of idiopathic peri-tonsillitis, where the tonsil is scarcely swollen appreciably, and where there is no history of rheumatism or of exposure, and yet quinsy sore throat develops; but these cases are decidedly rare. Where peri-tonsillitis occurs and recurs, Spring and Fall, year after year, in the middle-age—not in children or old people—you will find that the subjects are almost always rheumatic.

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In our patient here, the tonsils have a deep bluish-red color, which involves not only the tonsils but the parts about the tonsils; the soft palate is congested as far up as the hard palate; the anterior pillar of the fauces is crowded forward, œdematous and of the same bluish-red color. The other side shows only the bright red color of acute congestion. The tonsil is pressed forward to the median line and you see the open mouths of a number of the crypts. In this acute, hyperæmic swelling, and this bluish-red color, and the displacement of the tonsil you have the characteristics of quinsy sore throat or peri-tonsillitis.

The symptoms to which this condition gives rise are most marked and painful, and I know of no affection of the throat in proportion to the grade of the inflammatory action, which can give so much pain and discomfort as a quinsy sore throat. In protracted cases, where the pus forms low down in the pharynx, or in the posterior pillar of the fauces, the tissues here being denser, the physician is compelled to watch the gradual approach of these abscesses to the surface without being able to give much relief to the patient's suffering. These cases recur regularly every Fall and Spring until the patient reaches that period of life when the affection disappears of itself. The pain is deep-seated and lancinating at first, but soon becomes throbbing and agonizing, and to the patient who has had a quinsy sore throat is a positive indication that another attack has begun. Soon deglutition becomes absolutely impossible, and respiration is impeded because the fauces are blocked up by the hypertrophied and swollen tonsil. The pain is constant and radiates toward the ear of the affected side; the tongue is swollen and coated; the saliva constantly dribbles from the corner of the mouth, partly because he cannot swallow the saliva and partly because there is an increased secretion of the saliva. The patient cannot lie down and sleep for fear of suffocation, and he cannot eat on account of the pain and obstruction; he can scarcely speak; he is worn out, wearied, nervous and apprehensive. To the experienced eye, this picture is in itself sufficient for a diagnosis. I know of no affection of the throat which can simulate quinsy or peri-tonsillar abscess.

I pass on now to the second form of acute tonsillar disease—acute follicular tonsillitis. This is a very common form of acute disease of the tonsil; it is an easy one to study and understand, and an easy one to treat, but there are certain practical points to which I must ask your attention.

First, then, what is an acute follicular tonsillitis? To the best of my belief today, we are dealing in acute follicular tonsillitis with a germ disease, with a blood poison which has its local manifestation in the tonsil. I believe that if certain predisposing conditions exist—for instance, large, ragged, hypertrophied tonsils—a simple, catarrhal imflammation of the throat may be sufficient to make the soil favorable for the reception of that little germ which comes through the air, and entering the open mouths of the follicles, finds a lodgment there, and creates there a croupous inflammation which is the characteristic of follicular tonsillitis, and also gives rise to a blood poison which produces a marked constitutional disturbance of which I shall presently speak. Or it may be that the germ enters the blood and sets up there those poisonous changes which produce again the constitutional symptoms, and finally, produce the local manifestations in the throat. At any rate, please bear in mind that I consider it to be a germ disease. Although this germ has been eagerly sought for by competent microscopists, it has not been discovered, and we simply infer its existence from the clinical phenomena which this disease presents.

As I have said, a croupous inflammation is established in the lining mucous membrane of one or more follicles, and blocks up the follicles, and this obstruction is assisted by blood corpuscles, bacteria, foreign bodies and the like. The follicle having become filled, its contents overflow, as it were, around the mouth of the follicle in the form of a whitish, ovoid, clean looking little mass. A number of these masses may become confluent, giving rise to a larger pseudo-membrane; or they may remain separate, and the tonsil will then appear to be dotted over with these whitish follicles. Both tonsils are usually affected in follicular tonsilitis.

The constitutional symptoms are marked. There is a decided elevation of temperature; in the adult, the temperature not uncommonly reaches 101° or 102° and in children it is not unusual to find a temperature of 104° or 105°. This fever is associated with a rapid, tense pulse, extreme lassitude and a general aching of the whole body. During the first twenty-four or thirty-six hours there is profound prostration, with marked febrile movement. After awhile deglutition becomes difficult and, if you examine the throat at this stage, you will see the little white points appearing on the surface of the tonsils. As they grow, the urgency of the symptoms disappears. The disease runs its course in from five to seven days, but the marked constitutional disturbance only lasts for about forty-eight hours.

How shall you make the differential diagnosis between a follicular tonsillitis and diphtheria? You are constantly called upon to do this, off-hand, at once, and absolutely. Let me say frankly, that there are many cases in which the differential diagnosis between an acute follicular tonsillitis, where a large pseudo-membrane has formed on the tonsil, and diphtheria, in the early stages, is extremely difficult, and I would blame no man, however great his experience in throat diseases, if he insisted upon time for his diagnosis. In the meantime, however, every precaution must be taken to prevent possible spread of the disease.

Let me mention a few of the practical oints which I carry in my own mind hen brought face to face with such ases. In the vast majority of cases ey will enable you to make a correct differential diagnosis.

1. Remember that the membrane of iphtheria does not remain confined to the onsil, but that it spreads to the uvula, ft palate, and perhaps to the post-pharyngeal wall; in other words, it may leave the tonsil. The pseudo-membrane of follicular tonsillitis never does this.

2. The membrane of diphtheria is so closely adherent to the underlying parts, and you cannot lift it up from the mucous membrane without rupturing the capillary vessels, causing a slight bleeding. The pseudo-membrane of follicular tonsillitis is easily raised from the underlying mucous membrane with a probe; it leaves no abraded surface beneath it, and very often you can draw out with the pseudo-membrane the contents of the follicle, the mouth of which it covers.

3. The diphtheritic membrane is always thick. In follicular tonsillitis the membrane is thin and delicate.

4. The membrane of diphtheria is always of a dirty, yellowish color; the pseudo-membrane of follicular tonsillitis is pure white, or of a pearl-gray; it is clean and bright. The membrane of diphtheria after twenty-four or forty-eight hours becomes necrotic, and takes on a dirty, blackish-gray color—in short, it looks what it is, a necrotic, dead, or dying membrane. The pseudo-membrane of follicular tonsillitis on the other hand, always remains whitish, pearl-white or gray, and never becomes blackish or necrotic.

5. The tonsillar portion underlying the diphtheritic membrane is of a deep red or bluish-red color; the underlying tissues in a case of foilicular tonsillitis is bright red, never of a very dark, angry color.

These points, I am sure, will assist you, as they have often assisted me in making the differential diagnosis between diphtheria and the pseudo-membrane of acute follicular tonsillitis. Of course, we can go further, and with the microscope determine the presence or absence of the Lœffler bacillus, but I have given you the practical, bedside tests which will usually enable you to answer definitely and quickly regarding the true nature of the membrane.

Now, let me say a word about the contagiousness of follicular tonsillitis. Here, I must deal largely with the individual belief. I believe to-day, as a result of my own experience, that follicular tonsillitis is mildly contagious; that it is not safe to put others in the way of direct contagion; and my advice to you is that it is best to isolate the patient, and particularly to keep children from being around those suffering from this disease. You should also banish from the sick room adults having hypertrophied tonsils, or suffering from any condition which predisposes to such a contagion.

To simplify the treatment for you, I have had the principal points printed on these sheets of paper, and will distribute them among you. I shall run over them briefly.

First, then in the treatment of peritonsillar abscess, in the interval of the attacks, extirpate the tonsils, and get rid of this predisposing cause. In the treatment of the acute attack, I would say that an attempt to abort an attack is occasionally successful, but it will never do it after the first twenty-four hours; therefore, if this period be gone by, immediately administer anti-rheumatic remedies, such as sodium salicylate, salol, oil of wintergreen, and iodide of potassium, and with the first four doses, give one drop of Fleming's tincture of aconite. As a rule no more than four doses of this powerful drug should be administered. If sodium salicylate be prescribed, give about ten grains, every hour. Another useful measure is to allow the patient to frequently apply bicarbonate of soda to the tonsil with the moistened finger, for it gives great relief to the patient, although I cannot say why it does it. I constantly see tonsils which have been cut and maltreated in various ways; I have told you that the abscess is not in the tonsil, and therefore, it is folly to incise the tonsil. Blood-letting by *puncturing* the tonsil will relieve the tension and pain, but I tell you, never scarify. As soon as the existence of pus is established by digital palpitation, open the abscess by a free incision. The general local treatment consists in gargling the throat with water as hot as can be borne, the use of alkaline and disinfectant sprays to wash away the accumulated tenacious mucus; inhalations of steam, or the application of hot flaxseed poultices, frequently renewed, beneath the angle of the jaw. An application of a five or ten per cent. solution of cocaine will allay the pain. The abscess usually forms by the third day, unless it is in dense tissues.

Now, the treatment of acute follicular tonsillitis is simplicity itself, notwithstanding the great variety of drugs and methods recommended in our various medical works. Every case of follicular tonsillitis can be successfully and quickly treated by the following method:

For the stage of fever and lassitude, there is perhaps nothing better than antipyrine. Later on, nothing is better than quinine and strychnine for the physical prostration. Locally, you should administer every hour a half teaspoonful of the following, which should be slowly swallowed, in order that it may diffuse itself about the fauces:

℞ Tinct. Ferri Chloridi............... dr. ij.
Glycerini .... oz. ij.

You may also apply the tincture of the chloride of iron at regular intervals during the day directly to the croupous deposits on the tonsils, using a kalsominer's brush, one inch wide, which is very much better than the ordinary throat brush. An antiseptic and cleansing gargle is also grateful to the patient. A mixture of listerine and water may be used for this purpose.

In conclusion, then, remember to use the knife whenever necessary, avoid polypharmacy, assist Nature to do her work, and follow the few simple rules which I have given you.

Operating Accident.

A sad and unusual accident is reported to have occurred recently in the operating theatre of one of the London hospitals. One of the surgeons was engaged in sewing up the wound after a laparotomy, and, while in the course of doing so, he seems to have given a flourish to the needle in his hand, which penetrated one of the eyes of his assistant. The latter continued for some moments to attend to his duties, but was afterward compelled, owing to the pain in his eye, to leave the side of the operating table and sit down on one of the benches in the theatre. As soon as the operation had been completed, the surgeon examined the injured eye of his assistant, and found the lens was lying outside the organ, the sclerotic extensively torn, and the vitreous protruding.—*N. Y. Med. Record.*

A lady in distress wrote the following urgent note to her physician: "Dear Dr., please call at once, and bring your urethra with you." He took a catheter.

COMMUNICATIONS.

CHOLERA.*

ERNEST HART, London.

My Professional Brethren—I have not ventured to bring before you any new theme, or one which would in any way depend upon the eloquence or the special capability of the speaker. I have felt that on an occasion such as this, when you have honored me by asking for an address at the general meeting of this great association, I might most usefully occupy your attention by dealing with the subject which, from its own intrinsic importance and from the influence which it is likely to have, which it can hardly fail to have ultimately on the welfare of the population and the nation, should at least intrinsically demand your attention, whether you give entire assent or not to the proposition I shall have the honor to lay before you.

In dealing with the subject of CHOLERA I am dealing with one which has been perhaps more written about, more discussed, and more talked about than any other in our time. It is the subject of almost universal conversation. Since I have been here, questions have been put to me not only daily, but almost hourly. One is, "What do you think of our country?" as to which you may readily imagine I have been giving answers which I am certain have been very satisfactory. Second, "What do you think of the cholera?" "Is the cholera coming?" Then I will venture to mention briefly what I wish to be able to present to you to-day by an incontrovertible amount of evidence. That is, cholera is no longer a thing to be dreaded; it is no longer a thing to be wondered at; it is no longer beyond control. Although it is only a few ears since we in Europe and you in Amer- a made the acquaintance of cholera, and hen we first came in contact with it, it as the most striking and awful pestilence nown to our profession. However, the udy and application of a single practioner—an obscure practitioner, but one the greatest of the world's heroes—the studies of one man carefully followed out have robbed cholera of all its mystery; have pointed out its causes, and have put before us methods of extinction so certain and so easy that it will be a reproach to every nation, and especially a reproach to those great nations so endowed by nature, if in our own time cholera does not become as thoroughly extinct—as nearly extinct, as much a matter of the past—as typhus or the oriental plague, which have been conquered by medical skill and medical advice.

Every theory, every advance in knowledge, goes through certain very well known stages; as a rule, at the beginning it is denied. That is wholesome and necessary for the proof of its accuracy. The skeptic attitude is the necessary attitude. Presently it is ridiculed, and then comes the stage where its leading facts are accepted. Presently they are accepted, and finally they become so contrite everybody says "O yes, we have always known them."

A distinguished gentleman I have seen here to-day reminded me, in our early text books, the knowledge of cholera was summarized in about these words, "Cholera—Diagnosis, easy; etiology, uncertain; causation, unknown; treatment, useless." Well, now we have modified all that. If I had to take those headings to-day, I think you would agree with me in saying this: Diagnosis, difficult, very difficult—I will show you presently how difficult it is; thus, it is not at all desirable, for the commercial interests of the community, that cholera should be too quickly identified, and where it appears in its first early stages it is spoken of in the most endearing terms. When cholera first comes it is reported as cholerine—an attractive word. Presently, like the pleasant little French songs, it becomes, cholerine-cholera, cholera-cholerine. But, there is nothing more difficult, as our recent science has shown, than the diagnosis of cholerine from cholera, and there is nothing a microscopical examination will show, whether the early or late cases are cholera or cholerine. The diagnosis is no longer easy. We have yet a great deal to learn about the stages which characterize simple cholerine and Asiatic cholera. Another thing, cholera does not stop, as we suppose. You notice the importance of this in connection with the enormous expenditures and the disgraceful efforts to keep it out—a disease which we have invited, and, having invited by our negligence, try to keep out with quarantine. They are obliged, in virtue of their dirt, to fight a disease invited by dirt. It was at one time supposed a man with cholera must go through certain stages and quarantine was sufficient, but you now know the man may walk about with the cholera and may contaminate an entire water-supply. He may, as at one time, cause 16,000 cases of cholera with 6,000 deaths. Cholera, then, is not easily diagnosed. It is only capable of diagnosis by bacillar examination.

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* Address to the Members of the American Medical ssociation, Thursday, June 8, 1893.

Further than that, you know now very well a man may walk out of a cholera hospital cured, so-called, but with a slight diarrhœa. He may infect a river and may slay a community, for his discharges are often laden with germs. In three cases examined for me, the dejections were found to be loaded with bacilli. You see, then, diagnosis is not certain. We can always know when cholera is about, and should take extra care of all these cases of cholerine and premonitory diarhœa. Now, as to the pathology. The pathology I will not stop with to-day. The pathology has now been immensely cleared up, and the pathology of cholera is now no longer mysterious. We know how to deal with it as we do our other bacteriological diseases. Treatment, useless; we know no more of the treatment of cholera now than we knew of the treatment of cholera thirty years ago. And, that is no reproach to us, because for poisons you may find antidotes or partial antidotes, but an infective disease must run its course.

We know now there is such a thing as an evolution of disease. Cholera is one of those diseases which the public like to think of as a disease which comes by providence and goes by drugs. That is exactly the opposite of the facts. Cholera comes by man; it is a man-created disease, and cholera cannot be cured by drugs. Of course, there are drugs which alleviate and diminish the symptoms. Possibly there are drugs which diminish the number of deaths. But, as at the last Hamburg epidemic, in the early stage and in the later stages of epidemics, when patients are going to get well, everything will cure, and that is the time to try specifics. But, in the essential periods, when the epidemic is at the height, no drugs will modify the mortality.

Now then, as to the causation. We are entitled to say in some parts of Europe cholera will never appear again, and with certain precautions here cholera never can appear again. Now, let me take you briefly—I have here an immense mass of figures, but let me take you briefly over the history and analysis of the great epidemics of cholera since 1853, in order to prove from that precisely the point I am endeavoring to bring to your notice. You know, our first outbreak of cholera in Europe was in 1832. I was just looking here—I expect some here will remember 1832. Well, the Annual Register said the cholera left medical men with most opposite views. We know, first of all, it is epidemic and not endemic. We know it always comes from one place. I am ashamed—I am grieved, more than ashamed —to have to name that source of danger of pestilence to Europe and the world. That is India. It is within the Imperial British domains of India cholera is always found. In the earlier outbreaks from India, cholera usually came across the great seas, across the Caucas, and then by caravans and emigrants reached other towns, and finally that ill-fated city, Hamburg. And then, through Hamburg to Europe in general. The other route was by the Mecca pilgrims, the India pilgrims who carried cholera with them to Mecca, and there, by a process I will show you, diffused it throughout the whole of that country, and then brought it on to Alexandria. From Alexandria it took ship and came to Havre or came to England. That is the course it has pursued now on 25 different occasions. And, I notice this: When people travel on foot, on horseback, by caravans, cholera travels correspondingly slow with them. It took three years to come from Odessa to Europe. And, as steamships and railways have increased, its speed has increased. Cholera, then, travels along the lines of human intercourse and precisely with the rapidity of human intercourse. It makes no backward course. It has its back currents as people rest in a place; it has recurrence as the infection lies dormant. The next point is, that cholera, when we come to examine the facts, is a disease which is always carried by dirty people to dirty places and diffused by dirty water.

Now, let us take the places to which it was carried and see what is the demonstration I can offer you that it was carried by dirty water. Well, we will take, first of all, as an example, London. When cholera first came to London everything was mystery. It was in 1851. We did not know how it came. We thought it was blown by the winds, carried by pandemic waves, and we heard of cholera mists, telluric and meteoric influences and all that jargon. Then came one or two more instances. There was a celebrated pump on Broad Street; it was celebrated and the water most beautiful and sparkling. But water sparkles from human nitrates! Well, the Broad Street pump was a celebrated pump and people were sending from all over London to drink the water. It was suggested that it was precisely the people who were supplied with that water who were the ones that died. A clergyman came up and drank the water. It was very noticeable that he drank brandy with the water, for it was thought brandy corrected the influence of the water. We, of course, know it does not. The whiskey hurts you and does not correct the water.

This gentleman drank brandy in his water and ate a mutton chop, and spoke of his brethren who had died, and then he went home and died. It was afterward found this water became sparkling because of matter from the sewers from the neighboring hospital. This demonstration was carried on, and it was found the amount of cholera in all these subsequent epidemics in London were in precise rela- n to the water supplied with the animal tter. Of course, animal matter is not asant to drink, but some old ladies will t change their drinking water, saying t their fathers and grandfathers have nk it and they refuse to change. Of rse, it will not kill until poison gets to it.

In London there are the water compan- . During the first epidemic the Lam- eth company was the purer. About 137 per 10,000 of the population supplied with that water died with cholera, and only about 67 per 10,000 of those supplied by the other company. The experiment was so large and complete there could be no mistake about it. Houses side by side were supplied by companies furnishing water of various degrees of purity By the time the second epidemic appeared, the second company went a great deal higher up for the water supply, and the water was much purer. The proportion of deaths then was just inverted. It now had 30 per cent. less deaths than the company formerly more innoculous. A very ghastly experiment. There is nothing so sensational in the world. If you, who discuss sanitation, would take trouble to put it in a dramatic form, there is nothing which could so seize the public mind. Now, comes the next fact. In 1866—I was then 23 years of age—cholera broke out in East London. I had no skilled, expert hand, but was firmly convinced from study that its cause must be the water and nothing but water. I got, then, a very well-known gentleman to go down and look at the companies' works, and he came back and said, "There is nothing there. The engineer says the water is the ordinary water supplied in the ordinary way and there has been no change." The same result followed an investigation on the second day, but on the third day I found "Pump out of repair" on the books. Well, to make a long story short, I found one huge pump had been out of order and all the water was pumped directly into the district, that was affected with cholera, without passing through the filter bed. They were supplied with this water two days before the cholera broke out. Well, that was a very striking fact. Then we found it was only people of that district who were suffering with cholera. London escaped, for the district supplied by each company is limited by Act of Parliament, but in five weeks 16,000 people were taken with cholera and 6,000 died.

We will now trace how the cholera got into the water. A ship had come by the well-known route from Alexandria with *only* six or eight cases of cholera on board. The vessel was put in quarantine, the patients put in the hospital, and we had almost forgotten it; but when this occurred we traced these cases and found one had gone to a small town. And there only

16,000 people were killed, including the man, the doctor, the nurse, and 13 people of the village. But then came this other fellow, who was discharged as convalescent and had gone to a cottage on the river, the sewers of which connected with the river. He was taken with relapsing cholera. (If you poison rabbits with cholera bacilli, they will get well; but shortly they have relapsing cholera, when the intestines will be found full of cholera bacilli.) Well the man infected the river just at the very moment the water was taken from this point, in consequence of the breaking down of the pump, and distributed over the town. Thus one unhappy man and one unhappy engineer combined to kill all these people, and all got off Scott free. If any man sells me poison, as many a man does by accident, as an unhappy chemist sells morphia for ice cream, or a baker sells flour mixed accidentally with arsenic, even for his accident you have legal recourse against him; but against the distributing of poison by your water companies you have no recourse. Your municipalities are entitled to distribute cholera at intervals, typhoid fever daily and constantly, in all your great cities, and to poison their unhappy clients and yet go Scot free. They suffer no damage, and you have no remedy against them.

Well now I can show you that is true always with cholera. Since 1866, everybody has been so far convinced of the accuracy of this statement that our main experiments have been on water supply. In England we have spent thirty-five hundred million dollars on water supply, one hundred million dollars within the last year on water supply. I am satisfied we can never have an attack of epidemic cholera in England again. Our water supply is not perfect, and we may have limited outbreaks of cholera, but our water supply now places us in much better shape. We have no fear, and can have no fear of cholera in Great Britain.

The great seats of cholera epidemics have been Spain and Italy. And everybody knows, of course, of Hamburg. In Hamburg they knew they were drinking the filthy and impure Elbe water. But Hamburg is a free municipality—sufficiently under control of the citizens to leave them free to do a good deal of evil and not to do a great deal of good. The greatest mortality rate in Hamburg was down near the river, while further away from the river the mortality rate was much less. Hamburg is as absolute a demonstration of the water-born theory of cholera as the world has ever seen. Also the recent outbreak in the dead of winter near Berlin, where cholera broke out in a lunatic asylum, was a mystery. But it was found a single person had come on from Berlin. In Hamburg, by the way, they have a most beautiful system of irrigation. Charming! And the engineers have so arranged matters that the sewerage all passes out the same way into the river. Just below the outlet of the sewerage is the intake of the water supply. And to make things worse, this being in the dead of winter, everything was frozen, and the matter was taken up by the water supply very nearly pure. So, three or four days after the gentleman came to the hospital from Berlin, they had a tremendous outbreak of cholera. That is also the history of all Paris outbreaks. In Paris, during the warm season, a notice is put up stating the water now is mixed and you are only to drink such and such water. But a great many people cannot afford to drink from that supply, and they always have outbreaks of typhoid and cholera in Paris caused by the impure water supply, and it is stopped as soon as the water supply is changed.

And I may say, if it is supplied with pure water, they will never have another attack of cholera in Paris. Marseilles and Tulon are in the same condition. In Marseilles impure water is taken in, and they pass it out again, running great quantities over the streets to clean them. But, cleaning the streets will not stop cholera if you are drinking impure water. After heavy rains, cholera is usually diminished; but, after heavy rains in Marseilles, it was increased because the unhappy people were drinking the water from the rivulets. That was the cause of the cholera in 1866. When that epidemic reached us, I received a telegram, stating my water-born theory of cholera was at fault. Well, the water theory cannot be at fault. "Trace your water-supply up to the top," I told him, and he soon answered, "Cause found." They had traced it up to the top, and found the cause up the mountain. Cholera was prevalent along the frontier, and they had the whole frontier lined with police and soldiery. These camped at the top of the water supply. That supply was cut off, and the city deprived of water from that source, and cholera ceased within a week. That was a very striking case. Another striking case, perhaps more striking, was in Naples. I saw a little paragraph, stating, we are all very much afraid of cholera and we are taking every precaution at hand. A few cases have broken out. We are pouring large quantities of carbolic acid in the cesspools, and, odd to say, and disagreeable enough, our drinking water all tastes of carbolic acid. What happened was, cholera came, and there were 70,000 deaths—the most calamatous and vast catastrophy of modern times. The doctors were attacked and assassinated. They have since taken better precautions than religious processions or attacking the doctors. They have obtained pure water from beautiful aqueducts. Naples is immune from cholera. By a coincidence, little outbreaks occurred, and at the precise period when the aqueduct was being repaired, and at the moment it was repaired the cholera ceased. Naples, from being the most susceptible to cholera, is now one of the most immune, as any great city may become when you compel your municipalities to do their duty, to supply pure water, pure air and pure soil.

I shall not now detain you further than to point out this, that the latest results of microscopical examination and bacteriological research fully confirm this vast mass of evidence, collected from every city, every country, every epidemic of the last half century. Whereas, clinically and statistically, we can say on a basis of facts and figures, there never has been a country experience an outbreak of cholera, where the cause cannot be traced to the distribution of infected water. That is a atter of clinical observation. So, we y say scientifically now, we thorghly understand why that is. We ow the characteristic cause of cholera a bacterium, which has this simple perty: It is not in itself, and while sh, very poisonous; that it is not an ærobe but is an ærobe, and its favorite thod of development and propogation n soil and water. The cholera bacillus not easily communicated in the fresh stage, and it is not easy to infect guinea pigs or other animals with it, but if you cultivate it or let it cultivate itself in water, it becomes very effective, and becomes more virulent as it is multiplied in soil and in water. It is interesting, by the way, to notice it is difficult to infect healthy guinea pigs; but if you dose them with brandy or whisky and make them unhealthy, or if you give them opium, they are easily infected. Acid drinks, sulphuric acid and citric acid, have been shown to be very useful as preventatives. So, all these experiments confirm the broad facts which we have been able to learn from the examinations, and the final result is, if we can exert our influence upon State boards of health, to bring home a sense of responsibility to the executive officers of State, we shall be able to boast as a profession that we have in our generation pointed to the extinction of two great plagues of mankind. We have shown how three plagues can be exterminated, and we should hear no more from typhoid fever or typhus fever. Deaths from these diseases are just as much violent deaths as deaths from arsenical poisoning. They should be the subject for inquest, and it is for us to extend, not only to the rich who can buy mineral waters of all sorts, but to the poor who cannot always obtain sterilized water or boiled water, and for whom we ought not indeed to poison the water and require them to purify it. We should always be supplied with pure drinking water.

The devil shoots hard at the man who makes an honest tax return.

Put a Strong Stick in it.

The drug-store proprietor had employed a new boy for $3 a week. "I'll have a little stick in mine," said the man at the soda water counter. "A little what?" asked the boy. "A little stick," repeated the man with embarrassment. "In your soda-water?" "Yes, of course." The boy prepared the mixture. The man took a swallow, gasped, gurgled, and coughed. and, when he caught his breath, said," "What in thunder did you put in that soda-water?" "Well, sir," replied the boy, "I wouldn't have done it if you hadn't insisted; but as long as you wanted it I gave you the best brand of mucilage there is in the shop."—*Washington Star.*

OVARIOTOMY ON PATIENTS OVER SEVENTY, BY AMERICAN OPERATORS.

MARY SHERWOOD, M. D., BALTIMORE, MD.

In a report of 5 cases of laparotomy performed on patients over seventy years old, published in the *Lancet*, January 21, 1893, J. Rutherford Morison states: "Long lists of successful ovariotomies can no longer serve any good purpose, for it has been proved that the mortality of ovariotomy should not exceed 5 per cent. My excuse for publishing the following cases is the advanced age of the patients. Sir G. M. Humphrey long since pointed out that in old people repair and recovery are likely enough to follow major operations. This is true of abdominal sections—a fact not sufficiently recognized." That this statement is emphasized by facts is shown most conclusively by the statistics in the list of 100 cases of ovariotomy performed on patients over seventy years of age, which I have recently assisted Dr. Howard A. Kelly in collecting. While a complete tabulated statement of these cases, with an analysis of the same and inferences drawn therefrom, is reserved for publication in the *Johns Hoskins Hospital Reports,* at the suggestion of Dr. Kelly I have taken the cases reported by American operators as the basis of the present paper.

That special attention might be called to the cases of American surgeons seems appropriate as this list includes: 1. The earliest case found in the literature on the subject; 2. The oldest case on which ovariotomy has been successfully performed; 3. The greatest number of cases reported by any single operator.

The first ovariotomy on record as having been performed on a woman over seventy years old, was the case of E. P. and Wm. C. Bennett, of Danbury, Conn., who on the 17th of August, 1861, operated on a patient aged seventy-five years. An incision two inches long was made and seven or eight sacs emptied with a trocar. Silver sutures were used in closing the abdomen. The patient "recovered without any mishap."

To Dr. John Homans, of Boston, belongs the honor of having operated on the oldest case on record. In the *Boston Medical and Surgical Journal*, May, 1888, he reports a case of ovariotomy in a patient aged eighty-two years and four months. He removed a multilocular cyst of the left ovary, weighing fifteen pounds, and in December, 1892—four years after operation—reports the patient as alive and well. In addition to having operated on the oldest case recorded, Dr. Homans reports 12 cases of ovariotomy in women over seventy years of age, the greatest number accredited to any single operator.

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The table included in this paper contains 38 cases from the original list. Of this number, 33 recovered from the operation, 5 died, giving a mortality of 13.1 per cent. The mortality as based on the complete list of 100 cases is less than this (12 per cent.). The results of the operation are, therefore, very encouraging when one considers that, according to Bland Sutton, in experienced hands the mortality of ordinary ovariotomy varies from 5 to 10 per cent. This rate of mortality becomes increasingly suggestive when it is noted that in the series only 9 cases are reported as simple and uncomplicated. In 23 cases adhesions were more or less numerous, necessitating in 2 cases the removal of the uterus. In this connection the table seems to establish the fact that age in itself need not be considered an additional factor in the prognosis of ovariotomy. In the case of Boldt, the patient was seventy-four years old, cachectic, and much emaciated, with moderate ascites. The entire tumor was firmly adherent, many adhesions so dense as to require severing with scissors or knife; there were also adhesions with intestines. The retro-peritoneal glands were enucleated. The tumor proved to be a multilocular cyst of the left ovary of which the lower and posterior portions as well as the enucleated glands were carcinomatous. This operation was performed in March, 1887, and Dr. Boldt reports the patient as still living—nearly six years after operation. In one of Homans' cases the tumor was so adherent to the uterus that the body of the uterus had to be removed also. The case was that of a woman, aged seventy-two, from whom Dr. Homans had removed the right ovary five years previously, who had remarried after recovery from this operation, and from whom he now (1877) removed a multilocular cyst of the left ovary together with the uterus. In December, 1892, he reports the patient as living and well. In June, 1890, Dr. H. Marion Sims operated on a patient aged seventy years, removing a multilocular cyst of right ovary, weighing eight pounds, adhesions being so extensive that he was obliged to remove the uterus also, and the patient recovered and is reported as still living in January, 1890.

As the nature of the tumor is an important factor in estimating the results of the operation, an examination of the table shows that the most frequently occurring tumor is the multilocular cyst. Unfortunately, in a majority of the cases there is no histological report of the nature of the tumor extirpated. In one instance—a case of Dr. Kelly's—a careful microscopical examination showed areas of adeno-carcinoma in the cyst wall; another cyst was cancerous at base with involvement of the retro-peritoneal glands, while two of the multilocular cysts are reported as papillomatous; sarcoma, dermoid, solid tumor are noted once respectively, and in seven instances the cyst is unilocular. The absence of results of microscopical examination in some cases makes it impossible to reach any accurate decision as to the percentage of malignancy, although in seven instances the tumor is stated to be non-malignant.

With regard to the ovary affected, we have the statement in 27 cases, in 10 of which the tumor was of the right ovary, while in 17 the left was affected. It is interesting to note that in our list of 100 cases, 72 of which report on this point, the right ovary is involved in 38, the left in 32 cases (in 2 cases both ovaries being affected). No evidence is, therefore, afforded hat either ovary is the more frequent seat f disease.

The time of first appearance of symptoms the majority of our cases shows that the imors were for the most part rapidly rowing, in 6 instances the observation eing made less than one year before opera- on, while in 19 the time was between one nd two years. The remaining 6 cases hich report on this point give a time arying from three to ten years.

The subsequent history of these cases is a point of great interest; and here, too, the facts of our table give definite information in many instances. As was stated above, 5 patients died within ten days after operation. Of 8 cases reported as dying subsequently, 4 lived less than a year, while 4 others lived from 5 to 10 years after operation. The cause of death in these 8 cases is variously given—pneumonia, heart disease, old age, etc.

Eighteen patients recovered from the operation and are reported as living at present—*i.e.*, in January, 1893, when the facts for the table were collected. In two cases only was this report given less than a year after operation. Nine patients were alive and well one to three years after, and seven have survived operation and are still living from three to ten years after. Evidently we can draw no conclusion from the after-history of the patients against the advisability of operating on the aged, in the face of the fact that 16 of these 38 patients lived from two to ten years after the operation was performed, 12 of this number being alive at present.

The facts shown by our statistics summarized briefly are:

First, that the operation of ovariotomy in the aged presents no essential differences from this operation in cases of younger years.

Second, that the percentage of recovery from this operation in patients over 70, as shown by the results of American surgeons, is 86.8 per cent., the mortality 13.1 per cent.

Third, that the indications and contra-indications for ovariotomy in the aged are essentially the same as for this operation in general.

What some people call prudence is often what others call meanness.

The Surgeon's Enemies.

The surgeon's enemies are almost always sporeless bacilli, and though some of these show great resistance to the action of antiseptics, such as the staphylococcus pyogenes aureus, the common cause of suppuration, it has nevertheless been shown that carbolic acid destroys these organisms more rapidly than corrosive sublimate.—LISTER.

SOCIETY REPORTS.

AMERICAN MEDICAL ASSOCIATION.

Forty-fourth Annual Meeting, held in Milwaukee, Wisconsin, June 6, 7, 8, and 9th, 1893.

SECTION ON SURGERY AND ANATOMY.

Continued Report.

Chairman, Dr. James T. Jelks, of Hot Springs, Ark.

Secretary, Dr. Liston H. Montgomery, of Chicago.

The Section was called to order by the Chairman, who delivered an address on

THE ANTIQUITY OF SYPHILIS, AND MOSES AS A HEALTH OFFICER.

He dwelt upon the plague that afflicted Pharaoh and his household to strengthen the relationship of syphilis as it existed at that time and as it exists to-day.

Dr. A. J. Ochsner, of Chicago, contributed a paper entitled

A REPORT OF THREE CASES OF ACUTE INTESTINAL OBSTRUCTION TREATED BY LAPAROTOMY:

(1) Intussusception; (2) Volvulus; (3) Meckel's diverticulum.

The first case was that of a boy, aged three years, who, a week before coming under observation, fell and immediately felt slight pain in the cecal region, but of brief duration. Occasional pains were experienced during the next few days. At the end of a week severe spasmodic pains were felt in the abdomen, with nausea, vomiting, and a constant desire, with ineffectual efforts, to evacuate the bowels. Intussusception was diagnosticated and the diagnosis confirmed by celiotomy. The vermiform appendix seemed to have been thrown around the ileum, the constriction thus produced leading to the intussusception. The appendix was removed after reduction had been effected. On the fifth day the bowels were moved by a glycerine and water enema. The stitches were removed on the ninth day and the wound supported with adhesive strips. The pulse and temperature were but slightly affected, and the recovery was rapid and complete.

The second case occurred in a man 32 years of age, who fell into a ditch two or three feet deep, experiencing a slight pain in the left inguinal region. Two days later the abdomen became swollen and painful, and there were nausea and constipation. A globular enlargement could be seen in the lower part of the abdomen. Purgatives had been administered for two days without effect, except to increase the pain. Volvulus was suspected, and an operation for its relief undertaken. On opening the abdomen the suspicion was confirmed. The sigmoid flexure was found so distended that replacement within the peritoneal cavity was impossible. A rectal tube was passed, liberating a large amount of gas, after which the bowel could easily be replaced. After the fifth day the bowels were moved daily by enemata. Complete recovery followed without incident, the patient being dismissed thirty days after operation.

The third case occurred in a man aged 81 years, who, while in apparent health, suddenly developed the symptoms of acute shock. There was a sudden severe pain to the right of the umbilicus, which was thought to be due to the presence of gallstones. An anodyne gave relief for two days; then the abdomen became uniformly distended. There were nausea and vomiting, first of the stomach contents, and later of stercoraceous matter. There was no point of special tenderness. An operation was undertaken, and a loop of small intestine was found to have slipped through Meckel's diverticulum. The adhesions were so firm that it was necessary to apply double ligatures and cut between them, so that the condition must have been one of long standing. After the operation, uncontrollable vomiting continued and death occurred thirteen hours later, without reaction having taken place. Regret was expressed that the stomach was not washed out, as this might have relieved the vomiting. Earlier diagnosis and a younger age would both greatly have increased the chance of recovery.

UNNECESSARY RESTRICTIONS TO SURGERY.

Dr. John B. Roberts, of Philadelphia, contributed a paper on this subject, in which he entered a plea for the treatment of every surgical case on its merits rather than by rule. The opinion was expressed that many patients are detained in bed unnecessarily long on account of fractures of the bones of the legs, and that patients with fractures of the forearm are often likewise burdened with cumbersome dressings long after the usefulness of these had ceased to exist. Sprains and chronic joint-affections often demand massage and passive motion, rather than continued rest. It was held that the habit of restricting the diet of patients for days after an operation is unnecessary, as well as a large number of other customs that have been taught and practiced for so many years that almost no one stops to consider whether they are rational or not.

Dr. John E. Link, of Terre Haute, Ind., reported cases affording evidence of the surgical immunity of the peritoneal viscera. He gave the results of many operations performed in the most careless manner on dogs, and always with recovery of the animal. The object was to show that, when skilled surgical aid cannot be obtained, the family physician should proceed to operate in cases of abdominal injuries or other serious acute conditions, inasmuch as the peritoneum is much more tolerant of invasion than has been generally supposed, and the danger of delay in operating far out-weighs that to be feared from opening the abdomen. Dr. Link demonstrated his method of operating on dogs, and showed several specimens taken from animals previously operated upon.

WEDNESDAY, JUNE 7TH—MORNING SESSION.

Dr. C. Fenger, of Chicago, read a paper entitled

OPERATIONS FOR STRICTURE OF THE URETER IN HYDRONEPHROSIS AND PYONEPHROSIS.

He said that in hydronephrosis or pyonephrosis there must be an obstruction somewhere. In many cases of intermittent discharge, the difficulty is due to oblique insertion of the ureter into the pelvis, and the consequent formation of a valve at the point of junction. The fluid is prevented from passing until the distention and pressure are sufficiently great to overcome obstruction, and the accumulation escapes. Dr. Fenger has operated on such a case by splitting the valve and stiching its margins apart after opening the pelvis. Strictures of the ureter also cause hydronephrosis or pyonephrosis. They may result from ureteritis or from indirect traumatism. A case was reported in which pyonephrosis developed two years after a fall. An operation was performed, the stricture divided longitudinally, and stiches passed in the same direction as the line of the incision, thus converting the longitudinal into a transverse wound. The appearance of blood in the urine for a few days demonstrated the patulousness of the ureter. Recovery was complete. The best incision for this operation is the lumbar one, from the twelfth rib to the crest of the ilium, and then extended to the middle of Poupart's ligament. This gives ready access to the upper two-thirds of the ureter. The lower third can be reached by sacral resection. The value of relieving obstruction to the ureter is shown by the fact that after nephrotomy a fistula remains in 45 per cent. of the cases; while nephrectomy is to be avoided if possible, as the condition of the opposite kidney is generally not known, and the radical operation may result in speedy death from uremia if the second kidney is also diseased.

WHAT OPERATIONS MAY WE PERFORM ON THE GALL-BLADDER?

Dr. J. B. Murphy, of Chicago, followed with a paper on this subject, in which he said that the function of the gall-bladder is to regulate the pressure in the bile ducts, as the air chamber does in the steam pump. In support of this view, reference was made to the fact that the bile is always much more concentrated in the gall-bladder than any of the ducts, and also that in a very large number of operations upon the living subjects, the cadaver, and upon animals, the gall-bladder was never found empty in health. The pathological conditions of the gall-bladder calling for operative interference are chiefly cholelithiasis, cholecystitis, carcinoma of the head, of the pancreas, neoplasms involving the ducts, carcinoma of the gall-bladder and trauma. The operations, naturally, all necessitate celiotomy. Of 25 cases of simple puncture collected, one-fourth terminated fatally. This is to be explained by the fact that the walls of the gall-bladder are so dense and so slightly contractile that the puncture opening remains patulous, and thus allows the contents to continue to escape. In 23 cases in which an incision was made and drainage provided for, the mortality was 18 per cent. Dr. Murphy has had made a modification of his anastomosis-button, in which one part is two and a half or three inches in length, and being hollow, allows the bile to escape entirely externally to the peritoneal cavity, so that it is impossible for any leak to occur. In 59 cases collected, in which cholecystotomy was performed in two sittings, the death-rate was but ten per cent.—a very favorable showing. The same operation performed at one sitting, as advocated and practiced by Tait, is a much more serious procedure. Of 201 cases operated on by this method, 25 per cent. died, and in many others a sinus persisted. Incision with immediate suture—ideal cholecystotomy—has been practiced a number of times. In 30 cases collected there were 6 deaths—a mortality of 20 per cent. Dr. Murphy advises joining the gall-bladder with the intestine (cholecysto-enterostomy) in all cases in which it is necessary to perform cholecystotomy. This permits of complete closure of the abdominal incision, and digestion is not impaired by the escape of bile externally. Nussbaum was probably the first to employ this procedure, but on account of the great difficulty in effecting the anastomosis, the operation was gradually abandoned. By means of the anastomosis-buttons designed by Dr. Murphy, the operation becomes a simple one that can be quickly performed. Eleven cases have been collected. Seven have been operated on by Dr. Murphy himself; recovery taking place in all. Two other operations mentioned were also successful. The method was demonstrated by an operation on a living dog.

INTESTINAL ANASMTOMOSIS BY AN IMPROVED METHOD WITH TWO PLATES AND WITH TWO KNOTS; EITHER SILK OR CATGUT MAY BE USED.

This was the title of a paper read by Dr· M. E. Connell, of Wauwatosa, Wis. The author exhibited specimens and explained the operation by reference to diagrams. He said end-to-end approximation or lateral apposition may be practiced, the latter being the simpler. The operation is performed as follows: After making the necessary incisions, a suspending loop is inserted in the bowel just beyond the ends of the cuts, and held by an assistant. A suture, three feet long, is made to transfix all of the coats of one margin of the wound, and passed in the opposite direction through all the coats at a corresponding point on the other end of the bowel. This is repeated until the whole length of one side of the wound has been traversed, always leaving a loop of an inch or two.

Then, by turning the bowel over, the other margin of the wound is closed by passing stitches in the same manner; but this time drawing them taut so as to close the wound, This having been completed, the two ends of the first suture are pulled upon, and, after the apposition is accurate and firm, a knot is tied in each end. After the second knot has been tied both ends are cut loose.

Dr. E. W. Andrews, of Chicago, had used Dr. Murphy's buttons in a recent case of strangulated femoral hernia in which it became necessary to resect fifteen inches of gangrenous intestine. He made an end-to-end approximation. The subsequent course of the case was favorable, and there was prompt and satisfactory recovery.

Dr. H. O. Walker, of Detroit, said that one of the strongest points in favor of performing anastomosis by Murphy's method was the short time required to do it.

Dr. Bayard Holmes, of Chicago, read a paper entitled

A CASE OF CHRONIC GLADERS WITH RECOVERY,

in which he said that glanders in man is of two kinds: (1) acute, in which death usually occurs in three or four months, and (2) chronic, in which the patient may recover after three or four years. In the case reported, the patient was a farmer twenty-two years old, who had always enjoyed good health. In December, 1889, one of his horses became stiff, had a discharge from the nose and died in a week. The mate of this horse also became sick, and had numerous pustules over the body. In a short time the patient noticed a sore on one of his fingers. The affection was thought to be a carbuncle. In a short time five foci of the disease appeared in different portions of the body. There was at first sharp, burning pain, like that which follows the sting of an insect, and deep swelling. At three points spontaneous opening took place. When the patient came under observation, it was decided to remove the disease radically by the cautery instead of the knife. The diseased area was scraped thoroughly, the surface brushed with a strong solution of zinc chloride and packed with iodoform gauze dipped in a concentrated solution of potassium iodide. In all, fourteen different lesions appeared, requiring twenty different operations. Adenitis occurred but once. The diagnosis was confirmed by inoculation of animals.

A NEW OPERATION FOR VARICOSE VEINS.

Dr. Ernest Laplace, of Philadelphia, read this paper, in which he said the operation consists in ligating the long saphenous vein at the saphenous opening, and the short saphenous vein between the two heads of the gastrocnemius. The after-treatment consists of rest in bed, elevation of the limb, and careful wrapping in cotton. The patient may be allowed to arise in two or three weeks. Seventeen cases were reported, in six of which the operation was bilateral. All did well, and the ten recently heard from remain free from their trouble. Cocaine anæsthesia was used.

Dr. B. M. Ricketts, of Cincinnati, followed with a paper entitled

SPECIMENS DEMONSTRATING THE OPERATION OF GASTRO-COLOTOMY, END-TO-END ANASTOMOSIS OF GUT, AND THE CONNECTING OF THE GALL-BLADDER WITH THE ALIMENTARY TRACT, AS PERFORMED WITH THE MURPHY BUTTON, AND BY THE MANSELL OPERATION.

The conclusion arrived at from experiments on animals was that the operation of Mansell was one of the best methods so far described. It could be rapidly performed, and met all of the requirements.

Dr. Thomas H. Manley, of New York, read a paper entitled

A FEW NOTES ON TIBIO-TARSAL, TARSAL, MEDIO-TARSAL, TARSO-METATARSAL, PHALANGEAL, TRAUMATIC AND ARTIFICIAL AMPUTATIONS IN THE LOWER EXTREMITIES. SUBSTITUTES FOR PARTS LOST IN THIS SITUATION.

In cases of traumatism of the lower limb the author made a plea for more conservative surgery. He held that not a particle of tissue should be sacrificed that would survive. A secondary operation was to be preferred, if the patient so desired, for the cosmetic effect or the greater usefulness of the member.

Dr. I. N. Quimby, of Jersey City, agreed with the author to save all tissue possible. In 1887, he introduced a modification of Pirogoff's amputation, in which he does not resect the ends of the tibia and fibula, but places the sawn surfaces of the os calcis against the articular surfaces of the tibia and fibula. He regarded this as very important in the case of children, as the epiphysis was thus spared, and the growth of the bone not interfered with.

Dr. Donald Maclean, of Detroit, maintained that the mere removal of the articular cartilege would not interfere with the epiphysis. He considered Syme's operation as the best in this situation and practiced it, especially when the operation was performed for disease.

Dr. Summers, of Wisconsin, desired to endorse the procedure recommended by Dr. Quimby, and declared that a recent traumatic surface united better to a serous surface than to another traumatic surface.

APPENDENDICITIS, WHAT IT IS AND WHAT IT IS NOT, FROM A SURGICAL STANDPOINT.

By Dr. Joseph Hoffman, of Philadelphia. The author said that it was now settled that the appendix was situated in the peritoneal cavity, and, therefore, all inflammations of the process were intra-peritoneal. The anatomical relations of the appendix were such that a considerable degree of mobility was permitted, and the symptoms of appendicitis, therefore, varied in different cases. The presence of pus was always an indication for operation without delay.

Dr. J. B. Murphy, of Chicago, said he would remove the appendix in every case as soon as he had made the diagnosis. He had operated ninety-five times for removal of the appendix with seven deaths, five from general peritonitis, which had been present before the operation, and two from pyemia.

Dr. N. Senn, of Chicago, said we should be cautious not to operate without due consideration, as the operation might present considerable difficulty. Removal of the appendix was to be recommended in recurrent attacks.

Dr. Joseph Ransohoff, of Cincinnati, contributed a paper entitled

THE EXTIRPATION OF ANEURISMS,

and reported two cases treated in this way. One was a case of bronchial aneurism; the other a case of anterior tibial aneurism. In each case an incision was made over the tumor; the vessel traced in both directions; two ligatures applied, both above and below; the artery cut between and the tumor ennucleated. The following propositions were submitted: (1) Extirpation is the ideal operation; (2) in aneurisms of the forearm and leg, no other method should be employed; (3) in aneurisms that suddenly enlarge, and when rupture seems imminent, extirpation should be employed; (4) in recent traumatic aneurisms, the vessels should be ligated above and below, and if a sac has formed, this should be removed; (5) after other methods have failed, extirpation should be employed; (6) arterio-venous aneurisms should be subjected to the same treatment; (7) proximal ligation may be performed when the age of the patient, the location or other causes contra-indicate extirpation.

AN OPERATION FOR ANTERIOR CLEFT PALATE IN INFANTS AND OLDER CHILDREN.

By Dr. John A. Wyeth, New York City. He advises first to drill two holes in the hard palate; pare the mucous membrane from the margins of the cleft, and, with strong scissors or with delicate bone forceps, divide the alveolus on the short side at about its middle, and slide the anterior fragment forward and wire in this position. This closes the anterior part of the cleft. The lip may be operated on at the same time, or subsequently, as seems best.

JUNE 8TH—THIRD DAY.

The first paper read was by Dr. Frederick C. Schaefer, of Chicago, entitled

BRAIN SURGERY,

In which he reported 8 cases. These cases demonstrated the importance of carefully examining every case of injury and of prompt surgical interference in all instances in which a fracture is detected, even if there be no symptoms indicating intra-cranial involvement. In one case, in a man, fifty years of age, in which there was most extensive fracture of the anterior fossa of the skull and of the frontal bone, the patient walked a distance of a mile to his home. There were no symptoms whatever of any cerebral disturbance when the patient was first seen. Operation was advised but refused, and the wound was treated antiseptically.

ARTIFICAL OPENING OF PULMONARY CAVITIES; INSERTION OF RUBBER TUBE AND INJECTION OF CHLORINE GAS.

Dr. E. L. Shurly, of Detriot, read a paper on this subject. The author said that, although pulmonary cavities had been opened artificially occasionally since 1847, the procedure had only recently been recognized as a justifiable one. He recommends the additional injection of diluted chlorine gas into the cavities at intervals of three or four days. The gas is obtained by half filling a Wolff bottle with fresh chlorine water, forcing air through this into the pulmonary cavity.

Dr. J. MacFadden Gaston, of Atlanta, contributed a paper on

THE PRESENT STATUS OF THORACIC SURGERY,

in which he summarized as follows:

1. All penetrating wounds of the thorax may be closed hermetically by suture after allowing the discharge of fluid blood from the opening.
2. Foreign bodies lodged in the bronchi may be removed by incision of the trachea at the lowest available point.
3. Experiments for reaching the bronchi through the chest wall afford little encouragement in undertaking operation upon the human subject.
4. Medication as a preventive and curative agency in pleuritic effusion is worthy of trial before recourse to operation.

5. Aspiration is indicated when there are large serous accumulations, and likewise in pneumothorax, but cannot be relied upon for the relief of purulent collections.

6. Partial resection of ribs is attended with better results in some cases of empyema than the complete removal of the segments of several ribs.

7. The excision of a small portion of one rib, with the introduction of drainage tubes, has been generally attended with good results.

8. Washing out the cavity of the chest is not requisite, except in case of contamination and decomposition of the contents.

9. The operation of thoracotomy for abscess and gangrene of the lung should be accompanied with antiseptic applications and with gauze tamponage.

10. Tumors of the mediastinum admit of interference, but further improvements are requisite.

TUMORS OF THE NECK,

by Dr. William A. Rodman, of Louisville. In this paper the author considered the various cysts of the neck, and of these, those connected with the thyroid gland are quite common. In the treatment of such cysts, the speaker said that Kocher recommended partial excision of the gland. Total excision led to the cachexia strumipriva. In 18 cases of total extirpation observed by Kocher, but two failed to develop the cachexia; while of 28 partial excisions, no untoward after-effects were exhibited in any of the cases. Lymphomata of the neck were by far the most frequently observed. Sarcoma was more common than carcinoma. Unless seen early, cases of sarcoma of the neck did not offer satisfactory conditions for surgical interference. The author recommended the removal of tuberculous glands of the neck, as the infection spreads through the lymphatics and involves other glands.

Dr. Joseph Price, of Philadelphia, read a paper entitled

THE RELATIVE MERIT OF THE PRESENT METHODS OF TREATING PYELO-NEPHROSIS.

When the patient cannot stand a prolonged operation, incision and drainage should be employed. If there remains any secreting structure of the kidney, it is well to perform nephrotomy, as the possibility of a horseshoe kidney should be borne in mind. In this event, removal would result in speedy death from uremia. In the surgery of the kidney, as elsewhere, the simplest procedure that will meet the indications should be employed. Dr. Price related that he had performed incision, irrigation, and drainage in seven cases without a death.

THE SURGERY OF THE URETER,

by Dr. W. Van Hook, of Chicago. He said that the fact that the ureter was sometimes injured during abdominal and pelvic operations led him to devise a means of uniting the divided ends. One end is lighted, a longitudinal incision made above the ligature, and, by means of two threads, the other end is invaginated into the longitudinal incision. The opposed portions are carefully united, and if desired, covered with a flap of peritoneum to make the union more perfect. It is recommended, when it is desired to implant the ureter in the bladder, that the ureter be first stitched in the abdominal wound, and later, the bladder stitched as high as possible in the abdomen; and when adhesions have become firm, the ureter may be implanted in the bladder with considerable hope of entire success. It necessitates three sittings to complete the operation, but the results justify the method. The author advises against implantation of the ureter into the rectum. Other objections were the occurrence of ureteritis and pyelitis.

The speaker presented the following general considerations:

The extra-pelvic portion of the ureter is most readily and safely accessible for exploration and surgical treatment by the retro-peritoneal route; hence all operations upon the ureters above the crossing of the iliac arteries should be performed extraperitoneally, except in those cases in which the necessity for the ureteral operation arises during celiotomy. The intrapelvic portion may be reached by incision through the ventral wall, the bladder, the rectum, the vagina in the female, or the perineum in the male. The ureter is not only exceptionally well protected from injury, but by its elasticity and toughness resists violence to a remarkable degree. The histology of the ureters furnishes most favorable conditions for the healing of wounds. Longitudinal wounds of the ureter at any point heal without difficulty in the absence of septic processes and under the influence of ample drainage. In all injuries, when the urine has been septic before operation, or when the wound is infected during the operation, drainage must be effected posteriorly. The chemical composition and the reaction of the urine should be studied in all injuries of the ureter, the urine being rendered acid if possible and the specific gravity kept low. The pelvis of the ureter is, *cæteris paribus*, the most favorable site for wounds of the ureter, as scar contraction is not likely there to be productive of ill results. In aseptic longitudinal wounds of the ureter occurring in the course of celiotomy, suture may be practiced as recommended by Tuffier, and the peritoneum protected by suture. Transverse wound of the ureter involving less than one-third of the entire circumference of the duct, should be treated by free extra-peritoneal drainage and not by suture. In transverse injuries in the continuity of the ureter involving more than one-third of the circumference of the duct, stricture by subsequent scar contraction should be anticipated by converting the transverse into a longitudinal wound and introducing longitudinal sutures. In complete transverse wounds of the ureter at the pelvis, sutures may be used if the line of union be made as great as possible. In complete transverse injuries of the ureter in continuity, union should not be attempted by sutures. In complete transverse injuries of the ureter in continuity, union with subsequent scar contraction may be obtained by lateral implantation. In complete transverse injuries of the ureter very close to the bladder the duct may be implanted, but with less advantage into the bladder directly.

In transverse injuries of the ureter with loss of substance, the following conclusions were formulated:

1. At the pelvis of the ureter, continuity may be restored by Kuster's method of suture, provided the several ends can be approximated.
2. Rydygier's method of ureteroplasty in such injuries should be tried, if sutures cannot be utilized.
3. The primary operation should at least fix the ends of the tube as nearly together as possible. In both intra-peritoneal and retro-peritoneal operations the urethral ends can be approximated, even after the loss of about an inch of substance.
4. The use of tubes of glass and other materials for the production of channels, to do duty in place of destroyed ureteral substance, is rarely successful, and even if temporarily successful the new duct is almost sure to be choked by scar contraction.

The implantation of the cut ends of a ureter into an issolated knuckle of bowel is objectionable: (*a*) Because the bowel is not aseptic; (*b*) because the operation is dangerous. In injuries of the portion of the ureter within the pelvis, with loss of substance, the ureter should be treated as follows: If possible the continuity of the uterer should be restored by lateral implantation. If this is not possible, the ureter in vaginal operations, particularly in vaginal hysterectomy, should be sutured to the base of the bladder, with a view of future vesical implantation or formation of a vesico-vaginal fistula with kolpokleisis. In injuries to the pelvic ureter during celiotomy, when the continuity cannot be restored, and when vesical or vaginal implantation cannot be effected in the female, or vesical implantation in the male, the proximal extremity of the duct should be fastened to the skin, at the nearest point to the bladder arch. In such cases, as well as in ventral ureteral fistulae due to other causes, the bladder may be distended and sutured to the abdominal peritoneum and muscles as high as possible, and at a second operation the ureter may be implanted extra-peritoneally into the bladder. If the ureter will not reach the bladder, a flap of bladder wall may be cut out extra-peritoneally and reflected upward to meet the ureter and form a tube. It is legitimate under such circumstances to try Rydygier's method.

Implantation of one or both ureters into the rectum is absolutely unjustifiable under all circumstances, because: (*a*), the primary risk is too great; (*b*), there is great liability to stenosis at the point of implantation; (*c*), suppurative uretero-pyelonephritis is almost absolutely certain to occur. Ligation of the ureter to cause atrophy of the kidney is unjustifiable.

ANALYSIS OF ONE HUNDRED AND TWENTY-FIVE CASES OF HERNIA OPERATED ON FOR THE PURPOSE OF RADICAL CURE.

by Dr. Henry O. Marcy, of Boston.

The author said, continued experience and observation had confirmed the opinion formed many years ago, that the army of truss bearing sufferers will constantly grow less and less, as cases of hernia are subjected to proper operative procedures. The mortality of radical operations for hernia in good hands was very small, and the proportion of cures was very creditable.

Dr. Donald Maclean, of Detroit, followed with a paper entitled:

TRAUMATIC ANEURISM OF THE COMMON FEMORAL ARTERY, WITH LIGATURE OF THE EXTERNAL ARTERIES.

He reported two cases, and on account of the position of the aneurism, and the numerous and important branches that the femoral artery gives off, he deviated from the treatment usually followed and ligated the external iliac artery. Both cases recovered.

Dr. D. J. Hayes, of Millwaukee, reported two cases in which he had operated for the establishment and maintenance of a urethra above the symphysis pubis in chronic prostatic obstruction. The speaker paid a compliment to Dr. Hunter McGuire, who first devised the operation for this condition. The procedure was to be recommended on account of its ease of performance and the very satisfactory results.

THREE CASES OF TRAUMATIC RUPTURE OF THE SMALL INTESTINE, WITH EARLY OPERATION.

This was the title of a paper read by Dr. H. C. Dalton, of St. Louis. One case termimated fatally on account of operation being delayed too long. The other cases made satisfactory recoveries. The author urged immediate operation in such cases.

Dr. Howard A. Kelly, of Baltimore, read a paper on

URETERECTOMY.

He exhibited several photographs, showing the incision and various steps of the operation.

Dr. I. N. Quimby, of Jersey City, reported the case of a boy in which, a few hours after receiving a blow upon the head by a stone, convulsions supervened. It was decided to trephine after consultation. A button of bone was removed and the internal table was found much depressed and splintered. The patient made a complete recovery.

JUNE 9TH—FOURTH DAY.

Dr. A. Dallas, of New York City, contributed a paper entitled:

A NEW TREATMENT OF HERNIA,

in which he is said he devised a new form of truss, which consisted of a covered steel spring which was adapted to the body over the iliac crests, the anterior arm descending almost vertically and covering the entire inguinal canal. Perfect retention with the least pressure, comfort in wearing, and stability in proper position were the advantages claimed for the truss. The author recommends the employment of hypodermatic injections of morphine and atrophine every 15 minutes until the patient is comfortable, in cases of strangulated hernia, these injections to be made about the hernia. Should operation finally become necessary, it may be performed under morphine narcosis. A modification of MacEwen's operation was advised for the radical cure.

Dr. Ernest T. Tappy, of Detroit, read a paper entitled,

A CASE OF SUCCESSFUL END-TO-END SUTURING OF INTESTINE.

The patient was a man of 40 years of age, with a strangulated hernia for five days, and when he first came under the doctor's care, the sac and hernia were gangrenous. The sac had already been opened by a physician. One week after admission, when a line of demarkation had formed between healthy and unhealthy tissue, the adhesions were separated, a fresh section made, and end-to-end approximation of the bowel performed and maintained by suture of the mesentery, mucous membrane, and of the serous surface. There was complete recovery without complication.

Dr. A. B. Kirkpatrick, of Philadelphia, described a new applicator for introducing medicaments into the urethra, uterus, and rectum, which is made of aluminum, silver, or hard rubber, and consists of a cylinder of about 8 inches long, with an accurately adjusted piston. The author had found that a powder of iodoform, boric acid, morphine, and atropine, introduced by this applicator, was almost a specific in acute gonorrhea.

A NEW METHOD OF TREATMENT FOR STRICTURES OF THE RECTUM.

Dr. Joseph B. Bacon, of Chicago, read a paper on this subject. The operation consists in performing celiotomy in the Trendelenburg position. The rectum is exposed and the male half of the Murphy button is introduced into the sigmoid end, and the female half introduced on a staff through the anus and to the proper position in the rectum, an anastomosis thus being made around the strictured portion. In the application of the button, the portion in the sigmoid is sutured, but in the rectual half, a small opening is made in the bowel wall, and the cylinder crowded through and the button clamped.

Dr. W. P. Verity, of Chicago, read a paper on

COMPOUND FRACTURES OF THE SKULL,

which was illustrated by drawings.

Dr. E. A. Tracey, of Boston, described a new material for surgical splints and jackets, and a method of applying it. Wood-pulp is the material that he employs, prepared in sheets, and from them suitable patterns are cut.

SECTION ON PRACTICE OF MEDICINE.

Dr. Charles G. Stockton, Buffalo, N. Y., Chairman.

Dr. George W. Webster, Chicago, Ill., Secretary.

The first paper read was the Chairman's Address by Dr. Stockton, entitled

A REVIEW OF ULCERATIVE ENDOCARDITIS.

He said that a few years ago endocarditis was considered a simple inflammation of the lining membrane of the heart. After Osler's lectures in 1885, it became clear that the disease was sometimes infectious, and endocarditis was spoken of as acute, chronic and malignant and ulcerative. In relation to rheumatism, reference was made to the chemical theory of Prout and the nervous theory of Mitchell, but the disposition was manifested to accept the germ theory as being more rational. From the known facts it was concluded that endocarditis may, under favorable conditions, arise from any one of a multiplicity of special causes, and that its course may be as variable as the causes are dissimilar. Of the two classes, malignant and non-malignant, the paper dealt with the former. Ulcerative endocarditis depends upon the presence of a micro-organism that generally attacks the endocardium as the result of some preceding affection. Some forms of micro-organisms have the apparent faculty of inducing endocarditis in the healthy organism, and are regarded as special to this form of disease. Weichselbaum has discovered four such organisms; Fraenkel and Saenger haxe described one, and Lion and Girode still another. The bacillus coli communis has, in some cases, been the active agent in the development of this disease. A case has been reported by Dr. W. T. Howard, Jr., in the *Johns Hopkins Hospital Bulletin* for April, 1893, in which malignant endocarditis was found to depend upon a bacillus having morphologically and culturally the characteristics of the bacillus of diphtheria, although the patient presented no history of having had diphtheria. Different micro-organisms produce different pathologic chemical results. Some organisms invade the mitral and some the aortic valve by preference. Careful observations show that the main valves are first invaded. According to Saenger, the valves in a pathologic state contain vessels in which colonies of bacteria are found, so that the process may be primarily intravalvular; but in many cases the disease appears upon the free surface of the valves.

In Taylor's series, in 11 of 53 cases of endocarditis the lesion occurred on the right side. Lion suggests that aerobic bacteria grow best in the arterial blood of the left side, and anaerobic in the carbonized blood of the right heart. The opinion was expressed that cases of malignant endocarditis recover, and that it is a mistake to apply the term simple endocarditis to all cases that have a favorable termination.

Dr. J. G. Truax, of New York City, had seen 13 cases of ulcerative endocarditis which were fatal. Most of his cases had articular rheumatism. In two-thirds of them a mistake in diagnosis was made, and the true condition made known by autopsy.

Dr. Henry D. Didama, of Syracuse, dwelt upon the experiments of Richardson, who, he said, produced not only articular rheumatism, but also endocarditis, by injections of lactic acid.

Dr. H. J. Herrick, of Cleveland, Ohio, maintained that endocarditis was a secondary form of disease, and that if the blood was in perfect condition, there could be no endocarditis. Treatment should be directed to the predisposing cause.

SOME CONSIDERATIONS BEARING ON THE TREATMENT OF PNEUMONIA,

by Dr. W. H. Washburn, of Milwaukee, Wis. The author said that the death-rate of pneumonia was gradually on the increase in this country under the present methods of treatment. As long as physicians were unable to destroy the *materies morbi* of the disease, all efforts at treatment were but palliative. Support of the nervous system and elimination of the specific poisons of the disease and the products of retrograde metamorphosis were the indications for treatment. Alcohol was to be regarded not as a stimulant, but as a sedative.

Dr. R. H. Babcock, of Chicago, contributed a paper entitled

THE MEDICAL ASPECTS OF EMPYEMA FOLLOWING OR COMPLICATING CROUPOUS PNEUMONIA,

in which he said that, owing to its insidious onset, purulent pleurisy was frequently overlooked. He would especially call attention, as supporting this belief, to the vague and general manner in which the disease was treated by most of the text books. In many instances the disease was secondary to some pre-existing affection, especially croupous pneumonia and influenza. If due to the presence of the pneumonia coccus, there was a great tendency to spontaneous evacuation through the bronchi.

He recognized four types of empyema. The prognosis in the form of pneumonia due to the pneumonia coccus was good. Such cases usually yielded to simple puncture and drainage. The other forms indicated a graver prognosis, and required more active surgical intervention.

Dr. W. A. Batchelor, of Milwaukee, said the treatment of empyema should consist in incision and drainage. Many cases could be cured by aspiration, and he believed that bacteriological investigations of pleurisy would lead to better methods of treatment.

Dr. Martine, of New York, held that the reduction in the pulse rate in cases of pleurisy would prevent empyema.

Dr. George W. Webster, of Chicago, had treated seven cases of empyema, in persons ranging in age from 3 to 40 years, within the last sixteen months, by washing out the pleural cavity with a saturated solution of boric acid. All of the cases recovered.

JUNE 7TH—SECOND DAY.

POINTS IN THE CLINICAL HISTORY OF ERYSIPELAS,

by Dr. J. M. Anders, of Philadelphia. Attention was directed to the influence of the various seasons of the year upon the disease. The author collected a large number of cases from hospital and private practice, and after careful study found that the largest number of cases occurred in April, and that from April to August there was a gradual decrease in the number. More than one-half of the cases collected occurred under 30 years of age, and these were largely between the ages of 20 and 30. Of 1787 cases, 1239 were males and 548 females. Slight wounds and contusions of the face and head were exceedingly common as starting points of the disease. In only 7.8 per cent. was the affection secondary to chronic disease. The author said that the average duration of the affection in over one thousand cases was twenty-five and one-tenth days; that if the individual was in an enfeebled condition the duration was longer. Relapses occur in about ten per cent. of all cases.

Dr. H. A. Hare, of Philadelphia, said that erysipelas was quite frequent in cases of pronounced nasal and buccal lesions. In typhoid fever, for example, such lesions afforded entrance to the specific organisms of the disease.

DEMONSTRATION OF GASTRODIAPHANY,

by Dr. Max Einhorn, of New York City. One of the objects of the paper was to point out the great difficulty of making a correct diagnosis of abdominal disease, more particularly in the case of the stomach, which was the organ most frequently diseased. The apparatus exhibited by the author consisted of a soft rubber tube, to which was attached an Edison lamp. The apparatus can be introduced into the stomach with no more difficulty than is required in introduding the ordinary stomach tube. The patient must be in a fasting condition. and immediately before the passage of the tube, should be given one or two glasses of water. The author exhibited two patients and demonstrated the working of the apparatus.

Dr. John Aulde, of Philadelphia, alluded to the value of translumination in the diagnosis of laryngeal disease, particularly in young subjects, and said it might be of value in gynecic and rectal disease and abdominal surgery as an aid in diagnosis.

Dr. Joseph Eichberg, of Cincinnati, followed with a paper entitled

A CASE OF SUNSTROKE, WITH CONSIDERATIONS OF ITS TREATMENT.

The true pathology of sunstroke had not yet been determined, although it was known that there occurs a disturbance of the heat regulating center. The prognosis was influenced by the degree of cerebral activity. Treatment consists in reduction of the temperature by external applications of cold, and the administration of digitalis or the hypodermic injection of digitalin to stimulate the heart muscle.

THE TREATMENT OF INSOLATION,

by Dr. R. R. Ross, of Buffalo, N. Y. The author did not dwell on all that is conveyed by the term thermic fever, but confined his remarks to sunstroke. He said that high degrees of temperature might be borne if the air was dry, because he considered sunstroke very rare in dry hot countries, and that those who had clean skins and a good vasomotor system were less prone to it. The prophylactic treatment consisted in cleanliness and the avoidance of mental and physical exhaustion. He looked upon antiseptics as useless and dangerous, for the reason that they may produce heart failure and exert a destructive influence upon the blood corpuscles. An important point in treatment was the reduction of the temperature. He thought it was wrong to pack the patient in ice, on account of the shock that results. The temperature of the bath should be 45 or 50, and the patient should be immersed for two or three minutes, the head being cooled as rapidly as the body. He recommended rubbing the skin with a coarse towel, and having the process repeated. Atropine, sulphuric ether, camphur and strychnine he uses according to circumstances. In the case of convalescents a diet of liquid and farinacious food should be adhered to.

Dr. Hare, of Philadelphia, was inclined to doubt that the danger in sunstroke was due to conbustion, believing that it was due to the change that takes place in the nervous system.

Dr. N. S. Davis, Jr., of Chicago, read a paper entiled

SOME REMARKS ON DIABETES.

in which he advised in the treatment the use of Clemens' solution, except in the more advanced cases. Unless the desired therapeutic effect was obtained before, the dose should be increased to toleration. Doses of 6 or 8 minims were usually sufficiently large. The use of arseniate of strychnine had proved efficacious in his hands. He had tried pancreatic extracts, but had found them of doubtful value.

Dr. Didama, of New York, cited a case in which treatment with pancreatic extract was entirely useless.

HEADACHE,

by Dr. James W. Putman, of Buffalo.

The author first considered the part played by heredity in a given case of headache, and secondly dwelt upon the personal history as regards syphilis, dyspepsia, etc. After the above had been considered, the history of the headache should receive attention, when, and under what circumstances it came on. The character of the headache itself was then to be observed, its periodicity, location and characteristics. The author then discussed the anemic and congested classes of headache, together with the methods of treatment. He said that reflex headache from eye-strain was common, but oculists failed to afford relief owing to imperfect correction of the ocular defects.

Dr. J. T. Whitaker, of Cincinnati, said that eye strain was not such an important factor as a great many physicians had supposed.

AN ADDITIONAL NOTE ON THE TREATMENT OF EXOPHTHALMIC GOITER.

by Dr. E. D. Ferguson, of Troy, N. Y.

The author said that the 15 or 20 cases that had come under his care since a previous report had markedly improved under treatment with strophanthus, and there had been no relapses. He recommends for the initial dose 8 or 10 drops, three times daily, but the dose varies in different cases.

Dr. Hare, of Philadelphia, said he had never found strophanthus to act well, but that occasionally it causes severe diarrhœa.

Dr. Anders, of Philadelphia, said that when strophanthus was used alone it did not give good results. If arhythmia existed however, strophanthus and digitalis combined regulated the action of the heart much better than either of the drugs when used alone.

THE MUTUAL INTEREST OF THE MEDICAL PROFESSION AND INSURANCE COMPANIES IN THE PROLONGATION OF LIFE

was the title of a paper read by Dr. Charles Denison, of Denver, in which he did not advocate the insurance of invalid risks, but believed that the time would come when a better understanding of the varying longevities of invalids might lead to a knowledge of their insurability. The author believed that latent tuberculosis was the cause of more failures in health than was usually supposed, and urged the employment of systematic safeguards against accepting such lives on an equal footing with selected healthy risks.

Dr. John H. Hollister, of Chicago, in a paper entitled

THE TREATMENT OF CHOLERA,

accepted Koch's bacillus as the cause, and said that one of the most important problems was to prevent the transfer of this organism from one person to another. A certain means of safety was the sterilizaion of everything coming from the sick. pium was now repudiated in the treatient. Hypodermic injections of thymol ad proved very successful. Of all drugs erhaps there was no one more highly exolled than tannic acid, given by rectal njection along with large amounts of ater.

Dr. J. T. Whittaker, of Cincinnati, hio, contributed a paper on

THE PRESENT STATUS OF TUBERCULIN.

The speaker first set forth the reason and methods of its action. Human tuberculosis differed from laboratory tuberculosis. Invasion by micrococci, he said, was often secondary to the tuberculous. As a diagnostic agent, tuberculin was of the utmost service and certainty. In incipient cases it was valuable as a therapeutic agent, and in other diseases when the existence of tuberculosis was masked by unexpected symptoms.

In the discussion, Dr. Denison, of Denver, said he often used tuberculocidin in preference to tuberculin. As a diagnostic agent he especially commends its use.

JUNE 8TH—THIRD DAY.

The first paper read was by Dr. Henry D. Didama, of Syracuse, entitled

BRIEF CLINICAL MEMORANDA.

In the first place saliva is an excellent substitute for olive oil, glycerine, cosmoline or other substance as a lubricant for catheters. Although containing bacteria, saliva is not septic and is always at hand. Second, in preparing hemorrhoids for injection he anæsthetizes by means of ether or the A. C. E. mixture, and follows by digital dilatation of the anus. He then brings down the hemorrhoids, ligates those with small pedicles, tying with a bow knot, and then injects the material to be used. Third, he recommends the following facile reduction of prolapsed hemorrhoids: The patient is placed on his back with his knees drawn up. Cocaine is applied to the hemorrhoids if tender. These are then thoroughly lubricated with vaseline, and with the tips of two or three fingers pressed up while the patient at the same time is directed to bear down. The hemorrhoids readily slip up into the bowel. The patient himself can perform this operation without the aid of a second person. Fourth, for the ready relief of lumbago, the author has for ten years or more employed large dry cups over the entire lumbar region. Four cups are applied at once, and the application is repeated. In fifteen minutes the pain is entirely gone.

In the discussion of the paper Dr. Frank Billings, of Chicago, said the patient was in constant danger of infection from the use of saliva as a lubricant. He believes that saliva frequently contains pathogenic and pyogenic bacteria.

Dr. Charles Denison, of Denver, said there was danger of transmitting tuberculosis by the saliva when used as a lubricant. He also believes that it frequently contains tubercle bacilli.

Dr. John Aulde, of Philadelphia, laid stress upon the rheumatic origin of lumbago. He recommended the use of the iodide of potassium and the salicylates, as well as the faradic currents.

Dr. Joseph Price, of Philadelphia, considered appendicitis one of the most troublesome conditions met with by both gynecologists and abdominal surgeons. He takes the ground that the condition is purely a surgical one, and advises operative interference in every case.

Dr. Whittaker, of Cincinnati, preferred the word typhlitis to appendicitis, and said that no physician would object to operation in cases in which ulceration was present.

Dr. Joseph Hoffman, of Philadelphia, said there was a possibility of a case of appendicitis getting well without treatment, either medical or surgical, but convalescence was prolonged under such circumstances.

Dr. L. S. McMurtry, of Louisville, maintained that many cases of appendicitis were reported in the mortality lists as peritonitis, more particularly those occurring in males.

Dr. J. B. Murfree, of Murfreesboro, Tenn., contributed a paper on

DIPHTHERIA,

in which he said that the greatest number of cases occur between the ages of three and twelve, and but very few in infants. The disease may be transmitted by cows, and the period of incubation is from two to five days. The prognosis was always unfavorable. In the treatment few remedies are of much avail, and none is specific. Isolation and disinfection must be absolute. Antiseptic mouth washes, astringent gargles, the swallowing of ice, pepsin, trypsin, etc., to destroy the membranes; tincture of ferric chloride for the blood; mercuric chloride, alcoholic stimulants, especially large and frequent doses of whiskey, constitute a useful method of treatment.

Dr. E. J. C. Minard, of Brooklyn, followed with a paper on

EARLY ASPIRATION IN ACUTE PLEURITIS.

The diagnosis of the condition is not always easy. The author advised early aspiration.

THE DETECTION AND SIGNIFICANCE OF CARBO-HYDRATES IN THE URINE,

by Dr. Charles W. Purdy, of Chicago.

The remarks of the author were confined mainly to the consideration of glycosuria, for the quantitative determination of which he proposed a new test. The test solution consists of copper sulphate, 48 grains; pure potassic hydrate, 144 grains; strong ammonia, U.S.P., 9 ounces; glycerine, 6 drachms; distilled water, 20 ounces. It was said to be stable and reliable. Some of the blue solution is placed in a vessel and the urine is dropped in from a buret until the blue color disappears, when the amount of sugar present may be estimated.

JUNE 9TH—FOURTH DAY.

Dr. H. A. West, of Galveston, Tex., contributed a paper entitled

THE ASSOCIATION OF DISEASES AND MORBID PROCESSES,

in which he directed attention to the difficulty of ascertaining after death the exact morbid condition that was the immediate cause of death. Lowering of individual vitality as a result of famine, over-work, and intemperance is one of the main predisposing causes of various morbid condititions. A widespread disobedience of sanitary laws is the common origin of most of our epidemic diseases. In all acute infectious diseases there is a great tendency to involvement of the respiratory organs, and especially to croupous and catarrhal pneumonia. Cardiac disease is usually indicated by symptoms referrable to other organs, as dyspnœa, digestive disturbance, intesinal or renal derangement. Derangement of the function of one organ will give rise to modification of associated functions elsewhere. If the liver be primarily involved there occurs stasis of the entire portal system, with gastric and intestinal catarrh, constipation or diarrhœa, jaundice, etc. Inherited diatheses predisposed to the development of tuberculosis. Scrofulous and gouty individuals are subject to tuberculosis and lithemia respectively.

Dr. Charles Denison, of Denver, directed attention to the association of fibrosis with tuberculosis. He believes that the so-called tubercles are the vaults in which nature imprisons the tubercle bacilli to prevent their multiplication.

Dr. X. C. Scott, of Cleveland, took the position that disease was not inherited; that a certain state or condition that favors the contraction or developement of certain diseases may be transmitted from parent to child. As long as the general system was in a good condition the individual posesses a certain degree of immunity.

Dr. George W. Webster, of Chicago, maintained that syphilis could be transmitted by heredity.

THE NEW CHEMESTRY OF THE STOMACH AS A MEANS OF DIAGNOSIS AND GUIDE TO THERAPEUTICS, BASED UPON THE RESULTS OF ONE THOUSAND ANALYSIS OF STOMACH FLUIDS,

by Dr. J. H. Kellogg, of Battle Creek, Mich. In this paper the author described a new method of analyzing the stomach fluids, and proposed a new classification of gastric diseases functional in character.

Dr. Charles Dennison, of Denver, exhibited a new syringe for the injection of tuberculin, which he considered much better than the one usually employed. The syringe is marked in minims on one side, and on the other milligrams. The author uses a one per cent. solution for doses under 20 milligrams, and a ten per cent. solution for doses over 20 milligrams.

Everybody Has Seen Her

Do you know the doleful person? asks the *Omaha World Herald*. She, for the doleful person is almost always a woman, is always a good neighbor in health, and ies to be neighborly in sickness. But e makes a miserable failure at the latter. ou know how she acts. Don't you re-ember the last time the baby was sick? ter you had watched by the little one's d day after day and night after night, d watched the roses fade from the little e's cheek, and saw the little one's form ste away? And don't you remember w she tried to cheer you up with a one-led conversation, something like this:

"Why, Mrs. B—, how much worse the baby looks this morning. She looks just like Sarah Jones' baby did the night before it died."

"Gracious! I never saw a child so wasted away as Sarah's was, except yours. We just done everything for the child, but it wasn't no use."

"I never will forget how Sarah took on at a funeral!"

And the doleful neighbor suddenly remembers that she has to run back home to "set a sponge," and when she goes you hope she will never return. You look again at the suffering babe and feel that your heart must surely break.

But suddenly there is a knock at the door, and in comes the—well, sun-beam neighbor, is as good a name as any. She was over the evening before and quietly and unobtrusively helped to do so many needful things, and when she left, she left a word of cheer. And when she comes this time she says something like this:

"Why, how much better the baby looks this morning!"

And don't you remember what a bright gleam of hope crossed your mind?

"I never saw a child improve so much in so short a time before. I am sure the baby will soon be well."

And then the sun-beam neighbor re-arranges the bed, adjusts the blinds, tells you she will call again in a few hours, and hurries home.

Honest, now, didn't she leave a confident feeling behind her? She felt better and more hopeful. Baby, even, seemed to rally under the words; and when at last the little one was playing around your knee again, didn't you think of the words of the sun-beam neighbor?

The doleful neighbor has frightened more mothers to death, buried more babies and caused more tears than all the plagues combined.

She should be suppressed.

The man who never praises his wife deserves to have a poor one.

Masturbation, according to Prof. Parvin, is of rare occurrence in the female sex, the percentage being only about three-tenths of one per cent., whilst among the male sex it is about three per cent.

THE MEDICAL AND SURGICAL REPORTER

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SATURDAY, JULY 8TH, 1893.

EDITORIAL.

PREVENTIVE MEDICINE.

The address of Mr. Ernest Hart, of London, before the American Medical Association at its recent meeting, demands the attention of the whole medical fraternity. With startling clearness, he shows the relation of Cholera to the water supply and presents a mass of evidence that cannot be put aside or argued away. London, with its enormous population, and with its water supply divided between several companies, each drawing from a different part of the stream, presents an experiment which it would be hard to duplicate. The lesson is plain and the words of the text are written in human lives, sacrificed silently, without the knowledge that they were yielded up for any great cause, without the glory of war, without the religious enthusiam of the martyr; and yet they were martyrs in a cause greater than that for which men have fought and suffered—the prevention of disease and plague.

Medicine is only now coming out of the mist and darkness of the mediæval age and is only now grasping the idea that plagues are preventable. The old notion that they were beyond human control, that they were due to a diabolical agency against which it were folly to struggle with any weapon; or the later vague theory that they were due to a subtle miasmatic influence as uncontrollable as the wind on which it was borne, is giving way to the clearer light of scientific research and now we know that it is man himself, not the devil, not any breath of wind, to which we must look for the cause of pestilence.

When a great epidemic threatens, the cry goes up from the press of the land, medical and lay, for clean streets, clean houses and pure water, but after the danger is over there is only too much probability that the press will be silent and, like faithless sentries, sleep till the footsteps of the hostile army grow so loud that even the deaf sentry must wake. In an army, with the enemy within marching distance, such a guard would be unknown. Why should it be so in medicine, where the fight is not against a human foe but against a foe that is all the more deadly because unseen and sleepless.

If cholera had reached our city, and the deaths had amounted to anything like the ratio that there has been from diphtheria during the past winter, the town would have been deserted and the people panic stricken. But typhoid fever and diphtheria are diseases which we have gotten used to and take as a matter of course; perhaps, as with the diphtheria, quarantining those suffering with the disease and, ostrich-like, burying our heads in the sand of a quarantine, thinking that we are safe. Of what use is quarantine while the source of the disease, filth, is allowed to remain.

At one time the northwestern part of the city was a hot-bed for typhoid fever, and the hospitals in that section were full to overflowing with cases of the disease. The cause was not far to seek. That portion of the city was supplied with water from the Delaware, while the rest of the city received its water from the Schuylkill. The Delaware is a tidal stream, the sewage of the city empties into it; and, although the inlet for drinking water was above the outlet for sewage, the supply was polluted, and lives were lost in consequence. With the change of supply the typhoid almost wholly ceased.

The great illustrations of the value of preventive medicine come from the cities, for there men are herded together, and the danger of infection is greater. But how often does it happen that typhoid breaks out in the farmer's family—the result of neglect of sanitary laws. The people are hard to convince, and it is only when the matter is brought home by some terrible lesson that they will hear. Too often the patient says, "My grandfather drank from this well, and what was good enough for him is good enough for us," forgetting all the while that the community has increased in numbers, and what was a lonely farmhouse in the midst of broad fields has become the centre of a village.

People love liberty, and liberty of thought and action are the cornerstones of our country and her institutions. Therefore people resent what they term prying into their business, even in the matter of sanitation. They must be taught that it is not only for their neighbors' good, but their own, that they are compelled to abate nuisances. Liberty of action does not include danger to one's fellows.

Medical men must not fold their hands and keep silent. To a large extent they are the educators of the people; to them the people look for guidance in matters of health, and through them must the people be made to understand that certain diseases are preventable, and that if each will see that "his own front yard is clean," he and his neighbor will fare better.

Smallpox has been almost rooted out. Typhus is almost now unknown; and so may it be with other diseases if we but put our shoulder to the wheel as guardians of the nation's health. A great duty devolves on the board of health of the community. Generally, they are men of honesty of purpose; but too often the office is a convenient resting-place for the weary political worker or his crony, and the post is filled by men who know nothing of sanitation, and who care only for the paltry honor and perquisites of the position. Such things ought not to be, and the sooner the position of member of the board of health is taken out of the hand of politics and made honorable, the better it will be for the communities at large. The sooner medical men preach the great gospel of cleanliness in daily life and the importance of prevention, the better will it be for the public health. Cholera has probably been prevented from visiting this country, but there are other diseases against which we must keep up the struggle of prevention. Therefore, watch!

BACTERIOLOGICAL NOTES.

The Bacillus of Diphtheria (Klebs-Loeffler Bacillus.)

Although several species of bacteria, including micrococci and streptococi, have been attributed with more or less evidence as the etiological factors in diphtheria, the Klebs-Loeffler bacillus is now generally accepted as the cause of the disease. This germ was first described by Klebs in 1883. He found it the diphtheritic membrane but did not succeed in isolating it. In 1884 Loeffler obtained it in pure culture and since that time it has been known as the Klebs-Loeffler bacillus and its etiological value has been demonstrated by a large number of investigators.

Morphologically this bacillus varies very considerably. The rods are straight or slightly curved with ends rounded. They have a diameter of from 0.5 to 0.8 micromilleters and in length vary from 1.5 to 3 micromillimeters. One end of the bacillus is frequently club-shaped and irregular, forms which are almost,if not quite,characteristic of this organism. In an unfavorable culture medium the forms are especially varied, one or both ends being thickened or an expansion in the central portion of the bacillus. Occasionally the rods appear to be made up of irregular oval or spherical segments. No spores have been observed and the bacteria do not grow in filaments. It is stained with the ordinary aniline dyes. It takes the Graus stain. In order to demonstrate the bacilli in diphtheritic membranes, Welch and Abbott state that "Nothing can surpass in brilliancy and sharp differentiation, sections stained doubly by the modified Weigoit's fibrin stain and picrocarmine." In cover-glass preparations from the membrane the diptheria bacilli can be quite readily distinguished, especially if the Graus stain has been used.

Biologically, the diphtheria bacillus is *aërobic* and *faculative anaërobic.* It develops in various culture media at a temperature varying from 20°-42°C. The most favorable temperature being about 35°C. On nutrient agar the colonies are of a grayish yellow color, their outlines are not sharply defined and a rough almost reticulated surface. The growth is not very rapid. It grows in gelatine but does not liquify it. In bouillon it imparts a uniform cloudiness to the liquid; occasionally, however, the growth is in the form of whitish masses along the sides and in the bottom of the tube. The growth on potato has been questioned but Welch and Abbot found that it did develop on ordinary steamed potatoes. This bacillus develops in milk and, as it grows at a low temperature, it may be easily communicated from one person to another through this medium.

The bacillus of diphtheria retains its vitality in cultures for several months. It has been known to live for nine weeks in dried fragments of the diptheritic membrane. It is destroyed by heat at a temperature of 58°C. after an exposure of ten minutes.

The bacillus of diphtheria is fatal to rabbits, guinea-pigs and cats. Rats and mice are remarkably immune to inoculations of this germ. When rabbits or cats are inoculated in the trachea with cultures, a characteristic diphtheritic inflammation is produced, which is followed with general toxemia and death, from the absorption of soluble toxic products formed at the seat of inoculation. This has been and still is believed to be the cause of death in the human species suffering from this disease. This is evidenced by the large number of bacteriological examinations that have been made with negative results from the blood and organs of animals and people who have perished from this disease. That bacteria are only found at the point of inoculation has been the accepted belief. This fact renders the recent discoveries of Frosch and others, of the diphtheritic bacilli in the various organs of the body, of considerable importance in throwing light upon the possible range of distribution of these bacteria within the body.

The length of time during which the bacilli retain their vitality and their power to develop so abundantly in milk are facts worthy of consideration in the isolation of cases and the preventive treatment of other members of the family. The localization of the bacteria on the mucosa of the mouth and pharynx renders the marvelous results which have been reported by local antiseptic treatment quite possible.

A Contribution to the Pathology of Experimental Diphtheria, with speial reference to the appearance of Secondary Foci in the internal organs.

Abbott (*Bulletin of the Johns Hopkins Hospital*, IV. 1893, p. 29,) gives an account of some very interesting alterations produced by the bacilli of diphtheria. In addition to the lesions usually found in experimental animals as indicated by the investigations of Welch and Flexner (ibid II. 1891, p. 105,) Dr. Abbott describes the special lesions in the omentum "which consist in minute yellowish, lens-shaped foci, usually between the peritoneal layers and usually circumscribed in outline." "When visible to the naked eye they are rarely larger than the eye of a small cambric needle, and of about the same shape. They are occasionally larger than this, but more commonly smaller, being frequently so small as to be detected only by microscopic examination of sections of the hardened and embedded omentum. As a rule the omentum containing these bodies is somewhat congested, and often presents a shriveled appearance at its free margin. It is in this free margin that the foci are most commonly to be found. Upon microscopical examination these nodules are seen to be sometimes very sharply circumscribed, while again they are slightly less regular in outline. At times they may be seen lying between the folds of the peritoneum, while again they will be limited to the walls of lymphatic spaces. Upon closer examination they are seen to consist of polynuclear leucocytes and those having the horse-shoe-shaped nucleus closely packed together. The majority of the leucocytes composing the nodules contained bacteria which in their morphological and staining peculiarities were identical with the bacilli of diphtheria." In one instance pure cultures of virulent diphtheria bacilli were obtained from an unusually large nodule. The histological structure of the nodules is simple, consisting of masses of leucocytes, many of which are in the phagocytic condition.

Until comparatively recently, the opinion in regard to the relation of the diphtheria bacilli to the organism in which they are located has been that they remained at the point at which they had been deposited, but recently evidence has been obtained which will cause a modification of the original theory of localization. Frosch (*Zeit f Hygiene*, 1893, p. 49-52.) has reported the discovery in the internal organs of diphtheritic bacilli in 10 out of 15 fatal cases of the disease. The way in which the bacilli gain entrance to the internal organs is not known, but Abbot believes that the evidence now at hand indicates that their invasion is accomplished by means of the phagocytic cells.

Acute Ulcerative Endocarditis Due to the Bacillus of Diphtheria.

Howard (*Bulletin Johns Hopkins Hospital*, iv. 1893, p. 30) records a case of acute endocarditis due to the diphteria bacillus. The affection was in a man aged 44. It began with a chill, high fever, pain in the head, abdomen and limbs. The disease ran a course lasting seventeen days. The endocardium was found to be rough, ulcerated and hemorrhagic. The spleen, liver and kidneys were diseased. Cover-glass preparations, made from a thrombus-mass on the mitral valve and from the spleen and kidneys, all showed the presence of a bacillus with all of the morphological characters of the bacillus of diphtheria. This bacillus was the only organism found. Tubes of glycerine agar were inoculated from the mitral valve, the lungs, the liver, spleen and kidneys, all of which developed pure cultures of this bacillus. This germ has been studied by Prof. Welch and Dr. Abbott, as well as by the author, and the only point in which it was found to differ from the diphteria bacillus was its failure to kill experimental animals. The microscopic examination of the tissue showed the bacilli to penetrate to the depth of only two to three layers of cell in the endocardium. The histological study of the organ demonstrated the fact that the bacillus concerned in the lesions present is to a certain extent a pus-producing organism. There was a decided hyaline degeneration noted in the muscle tissue of the valves of the heart. As the author states, "the striking points in this case are a malignant endocarditis with general infection caused by a bacillus that is morphologically and by culture methods indistinguishable from the bacillus of diphtheria." Here we have not only a wide distribution of the bacilli in the body, but the primary lesion situated in a very unusual place (endocardium). Although this bacillus failed to kill guinea pigs, others have found the Klebs-Loeffler bacillus unable to destroy these animals. According to Prof. Welch, this is the first time that the bacillus of diphtheria has ever been found to be the cause of ulcerative endocarditis.

TRANSLATIONS.

TOXIC JAUNDICE DUE TO INFECTIOUS DISEASES.†

and that the mechanism of its production is simple enough and readily understood. Its pathogeny, however, is more compli-

Rendu, in treating of this subject (*Le Bull. Med.*, May 28, '93) says that simple catarrhal jaundice has probably some intestinal complication as its point of origin, cated. Very probably, as Chauffard has first shown, it is due to an attenuated and benign affection, but nothing definite can be stated. However, there exist other forms of jaundice, truly infectious in nature, which follow in the course of general diseases and which are very difficult to explain. He reports two cases, one occurring in a woman of 67, who appeared to be suffering with a pneumonia of the apex, and in whom a jaundice supervened without any obstruction of the biliary passages, and the other in a man 32 years of age, who developed a marked jaundice in association with a facial erysipelas with cerebral complications, but without obstruction of the bile-ducts.

Such cases undoubtedly have a certain connection with malignant jaundice. This question of pleiochronic jaundice, as it has been called, is a very complex one, as yet unsolved. Anatomically there exists a very great difference between these patients and those with catarrhal jaundice, namely, that in the former the biliary passages are absolutely permeable. This is a capital point on which are based fundamental clinical differences, viz: the colored robes, at times the bilious diarrhœas, the urine more or less deeply pigmented, but less than in jaundice by obstruction. A second difference consists in the almost complete absence of hemorrhage in the two cases reported, while grave jaundice is accompanied, so to speak, invariably with hemorrhage of the skin and mucous membranes, particularly with melena and epistaxis. We cannot consider as hemorrhagic manifestations the several ecchimotic *taches* which the female patient presented on her wrists, nor the insignificant drops of blood which constituted an attempt at epistaxis in the second patient.

Rendu insists upon the point that at the base these jaundices that are allied to the infectious diseases have close affinities with malignant jaundice. They are not *per se* of the nature of grave jaundice, but they become such by virtue of their concomitant visceral complications, notably the renal complications. This law is verified in the two cases reported. In both the kidneys were functionally bad, the urine scanty and albuminous. In this form of jaundice he claims that the renal lesions are, so to speak, the key to the problem. The biliary poisoning adds to itself a poisoning of urinary origin; the kidneys become unable to eliminate the poisons and become altered, the more in proportion as the impregnation of their epithelium by the bile is older and more profound. The kidney, however, is not alone in the causation of the rapid evolution of the malignant jaundice. The lesions of the liver play a certain important role. This fact cannot be doubted when we find, as in the second patient, the lesions of cirrhosis and interstitial hepatitis. But the alterations are not always evident, and in fact the liver may appear almost healthy, aside from the biliary impregnation. That which is important to bear in mind is that in this variety of jaundice the poisoning of the economy is always of a complex origin, and that the patients do not succumb only to biliary poisoning. It is well known besides, as proven by the experiments of Vulpian, that injections of bile are relatively but slightly poisonous. This will explain the long persistence of certain forms of chronic jaundice which only moderately alter the general health.

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† Translated for THE MEDICAL AND SURGICAL REPORTER, by W. A. N. Dorland, M. D.

An interesting point is the frequent association of pneumonia and jaundice. Grisolle, long ago, remarked that pneumonia of the apex very frequently accompanied the grave forms of jaundice, a statement that destroys, by the way, the theory of hepatitis by continuity. Gubler, in 1872, showed that usually in pneumonia the jaundice is not biliary but hemapheic—the theory of blood jaundice. He explained it by the exaggerated destruction of the blood corpuscles, causing the escape into the blood of too much unused hemoglobin, thus giving rise to a coloration of the tissues—a greenish yellow. It is admitted that the microbes of the affected part secrete a poison which is absorbed in a different manner by the tissues and thus determines variable irritative lesions. Whatever may be the form of poison, it is interesting to know how the jaundice is produced under its influence. Three hypotheses may be advanced: either the blood corpuscles are destroyed in the blood and the biliary pigment immediately formed; or, the irritated liver secretes bile abundantly, with a polycholia and biliary infiltration of the tissues; or, finally, the later view, there is an obstruction to the intra-hepatic biliary circulation due to an obstruction of the inter- and intralobular biliary canaliculi. The first hypothesis cannot be sustained, as Stern has demonstrated. The second hypothesis, that of a primary polycholia, due to toxins which penetrate into the liver, appears to Rendu to be an expression of the truth, at least in the greater number of cases. It is, moreover, proved clinically and experimentally.

The treatment of these morbid states, unfortunately, belongs to theory rather than to practice. Theoretically, the toxins should be driven out without debilitating the patient. Here is the difficulty of the problem. Purgatives, and especially drastic purgatives, are contraindicated on account of the great prostration they induce. Sudorifics, as pilocarpin, are not without danger, on account of the bad state of the kidneys. Our resources are very limited. Rendu thinks the better plan consists in utilizing the natural reactions; hot drinks, tea, coffee, which provoke at once diuresis and diaphoresis, while stimulating the nervous system; injections of caffeine, which especially answers for the last indication, are, without doubt, valuable; finally, milk diet and careful regime for the alimentation of the patient. Best of all is to envelope the patient in a wet jack to induce diuresis and perspiration. This may be continued for a full hour without danger.

A REPORT OF FIVE CASES OF CONGENITAL STRICTURE.*

The author (Dr. Werner, of Markgröningen,) reports, in detail, five cases, which have come to his notice during a practice of 40 years. He has never seen a complete imperforate anus.

The first case, which happened in 1867, a child aged 20 weeks, had suffered from birth; defecation being extremely painful and covering a long period of time, owing to the small opening.

The author made a small incision with a bistoury having a blunt end, and enlarged the incision with scissors, introducing a catheter at once incited the bowel to ction; the lower bowel was thereby mptied. Three days later the child, having had no movement during the interim, was again suffering considerably; and it became necessary to resort to injections and the use of the catheter, which again gave relief.

One month later the mother reported that the child was well, excepting that it was necessary to use the injection daily.

In February, 1891, the author states that the former patient married and had two (2) children, and two years after the operation she was able to do without the injection, and that now she is enjoying perfect health.

Case II. Seen in 1879, age 5 months; always seemed to have pain on defecation, which had always been thin, Four days before, being seen, she had begun to discharge small, round balls of fecal matter, causing great pain. A female catheter was easily inserted; after being passed 3½ c. m. seemed to come in contact with a constriction. A further examination with the little finger proved the presence of an unmistakable stricture.

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* Translated for The Medical and Surgical Reporter by Marie B. Werner, M. D.

The author performed a successful operation, which he gives in length; the child recovered promptly, was found enjoying good health in 1891.

Case III. Seen first January, 1891, aged 11 months; has been suffering since birth from difficult defecation. Operation same as case second; prompt recovery.

Case IV. Seen first August, 1878, aged 9 weeks, and had had two previous operations; previous diagnosis, complete closure of the rectum, which the author seems to doubt. An operation seemed to be successful, as in others. The communication received 13 years later said, however, that the boy is well developed, mentally sound, but that up to his seventh year had had no control over the sphincter ani; and even now cannot retain any liquid movement. An investigation of the parts shows a patulous opening, size of a cherry stone, large enough to admit an ordinary lead pencil; in passing the finger into this opening, one reaches an obstruction, in all probability a healthy internal sphincter. The child suffers no pain and never passes blood or mucus.

Case V. Seen in January, 1889, the child 2½ months old, which was so sick and emaciated that an operation was out of the question, died several days after being seen.—*Memorabilien*, May, 1893.

A CASE OF FRACTURE OF THE HUMERUS IN A CHILD ONE DAY OLD.*

Gurlt has shown in a statistical table, comprising fourteen hundred cases (prepared by B. Gerber, *Gyoyazat*, No. 14, '93), that the above-mentioned fracture occurred but in five children who had not yet reached their first year. Of these five, there were three cases of fracture of the femur, one of the scapula, and one of the clavicle; none were recorded of the upper extremities.

Dr. Gerber's case is for that reason, a rare as well as an interesting one. On the 10th of December, '92, he was called to see a child, the complaint being made that it could not lift the left arm. A careful examination revealed a normally developed baby whose left arm, at about its upper third, was crooked, crepitation being easily demonstrated, showing the bone to be completely fractured. Reposition of the ends was produced by decided conuler extension. The entire arm is then encircled by a broad bandage, over which a splint made of heavy paper was properly adjusted, allowing the position of the arm to be at right angles, and then bandaged to the body after careful protection with cotton. The bandage was removed every seven days. After the removal of the second bandage there was sufficient callus thrown out, making the union at that early date secure. With the exception of the first few days, when a slight œdema of the fingers and hand was present, and which was removed by a gentle massage, the fracture healed thoroughly in three weeks, with no untoward symptoms.—*Der Kinder Arzt,* May, 1893.

CORRESPONDENCE.

Epistaxis.

To THE EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—Sir: Permit me to testify to the efficacy of the methods of staying epistaxis, recommended by Dr. Phillips in your issue of the 6th of May, p. 709. The method has been long known and practiced in Dublin. We ascribe its introduction to Mr. Josiah Smyly, from whose son, Mr. (now Sir Philip), Smyly, I learned the method as a student of the Meath Hospital of this city.

Yours truly,
GEORGE FOY.

7 Cavendish Row, F. R. C. S., Rutland
Square, East, Dublin.
June 9th, 1893.

Treatment of Acute Coryza.

℞	Salol	10.0
	Acid salicyl	2.0
	Tannin	1.0
	Acid boric	40.0

M. ft. pulv.
Sig. Use as snuff every hour.

—*Der Kinder. Arzt.*, May, '93.

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*Translated for THE MEDICAL AND SURGICAL REPORTER by Marie B. Werner, M. D.

ABSTRACTS.

HINTS TO PREVENT THE SPREAD OF CONSUMPTION.

Wm. R. Huggard, of Davos Platz, Switzerland, sends the following: All cases of tubercular disease of the lungs ("consumption") take origin directly or indirectly from other cases. This is now an established fact. Infection, however, is easily provided against if certain simple precautions are taken.

The chief modes of infection are:—

1. *By inhaling dried and pulverized expectoration.*

This is apt to occur when an ordinary pocket-handkerchief is used by a tubercular person for expectoration. When such a handkerchief is opened, the dried expectoration is likely to be pulverized and diffused through the air. Thus it may be inhaled by others, as well as by the patient himself, who is likely to suffer from drawing disease-germs into portions of lung previously unaffected.

Another source of pulverized expectoration is the habit of spitting on the ground. The expectoration becomes mixed with dust, and then is easily carried into the air. This habit, therefore, is not merely offensive, but dangerous.

2. *By using spoons, cups and other articles of the kind which have not been properly washed after having been used by tubercular persons.*

3. *By kissing.*

This source of infection is especially to be guarded against in the case of children.

Self-infection may occur, in addition to the ways mentioned, *by swallowiug the expectoration.* This habit is likely to lead sooner or later to infection of the intestines with tubercular disease.

Knowing the channels of infection, we n easily take effective precautions.

The sputum must be destroyed, and must t be allowed to become dry.

A spitting-cup or flask containing just ough disinfectant solution to cover the ttom of the vessel should always be ed for the expectoration. Out-of-doors pocket spitting-flask, such as Detteiler's, should be employed.

Pieces of linen or calico about ten ches square may also be carried. These should be used only in case of absolute necessity, and should be burnt as soon as possible afterward. No piece should be used more than once.

Bedrooms that have been occupied by tubercular patients *should be thoroughly disinfected* before they are occupied by other persons, and a declaration or assurance on the point should always be demanded.

If the previous occupant of the room never allowed the furniture, hangings, or carpets of the room to be contaminated with the sputum, there would be little need for this precaution. But as people, ordinarily of cleanly personal habits, sometimes show a surprising amount of ignorance or carelessness in this respect, the following points should be insisted on:—

1. Carpets, curtains, and bed-coverings should have been exposed to superheated steam under high pressure.

2. The floor and walls of the room should have been properly disinfected. (Rubbing with new bread followed by the application of corrosive sublimate solution is probably the most effective practical method.)

There is *no danger of infection from the breath of a tubercular patient.* The sole danger of social intercourse arises from neglect of the precautions described.

Fresh air is of the highest importance for tubercular persons. Hot and stuffy rooms have an evil influence over the disease. Except in special circumstances, the bedroom window should be kept open by night as well as by day.—*Univ. Med. Journal.*

A Magnificent Microscope, costing eight thousand seven hundred and fifty dollars, has been manufactured at Munich for the Chicago exhibition. It possesses a magnifying power of fourteen thousand diameters, and can be increased to sixteen thousand with oil immerson. Electricity furnishes and regulates the source of light, which, placed in the focus of a parabolic aluminium reflector, reaches an intensity of eleven thousand candle power.

CURRENT LITERATURE REVIEWED.

THE ANNAL OF GYNECOLOGY AND PÆDIATRY FOR JUNE.

Dr. Charles P. Noble contributes two papers; the first.

Certain Cases of Neglected Pus-tubes.

He reports three cases of pyosalpinx which were allowed to run their course. The first case died, after years of pain and invalidism, with a huge collection of pus in the abdomen. The second patient had arrived near the period of the menopause without conceiving. The cervix was dilated with the idea of curing the dysmenorrhœa with which she suffered. The result of the operation was a violent attack of peritonitis and pus formation. The abscess finally burst into the bowel and continues to discharge at intervals. Dr. Noble advised the removal of the pus sac. In the remaining cases, the trouble followed the introduction of sponge tents into the uterus for the cure of a catarrh. The patient had an attack of so-called typhoid fever following the treatment, and the abscess finally emptied itself through the vagina. The report is presented to refute the teaching of those who deny the very serious and even fatal character of pyosalpinx when not subjected to early removal by cœliotomy.

The second paper by Dr. Noble is entitled

Certain Aspects of Puerperal Septicæmia, with the report of a case of Acute Puerperal Cellulitis.

The author protests against the false position, taken by some, of denying the occurrence of inflammation of the pevic cellular tissue, although he has not met with pelvic cellulitis except in the puerperal state, and as an acute inflammation ending in resolution or abscess. Its occurence is rare, however, as compared with intra-peritoneal inflammation, due to salpingitis or to ovaritis. In the treatment of puerperal sepsis after it has extended to the tubes or to the broad ligaments, the use of the curette or intra-uterine douche is not advisable. We must trust to nature, assisted by our remedies, to bring about resolution, or in case of pus formations must resort to operation. Much depends on whether the secondary inflammation is in the tubes and peritoneum, or in the broad ligament. If in the broad the ligament the pus can be evacuated through the vagina or over the groin. If in the tubes and peritoneum, an early section is imperative.

Dr. Edward P. Davis contributes a paper on

The Treatment of Large Ovarian Cysts, with the report of a case; Extirpation of the Coccyx for Congenital Cyst.

In the case of ovarian cyst reported, the patient died of sudden syncope six hours after operation. The total weight of the solid and liquid portions of the tumor reached the great total of 160 pounds. The author raises the question whether it is possible to remove so large a mass from the abdominal cavity without producing such a change in circulation as to cause fatal syncope. Two methods of operating can be practiced; the first is to stitch the cyst to the abdominal walls and use drainage, allowing the cyst to empty itself gradually; the second method is the removal of the entire cyst as practiced.

The second case reported, is an example of abscess over the coccyx without appreciable cause, and accompanied by pain at the sacro coccygeal joint, completely relieved, first by evacuation of the abscess and then by extirpation of the coccyx.

Dr. R. R. Kime discusses

Ectopic Pregnancy—Pathology, Symptoms and Treatment.

In regard to the treatment, he says: In primary or secondary intra-peritoneal rupture of the ectopic sac, operate by cœliotomy at once. Before primary rupture, extirpate cyst tube and ovary. Fœticide for this condition by means of electricity and morphia injections, are but temporary expedients, suitable for cases of doubtful diagnosis, or when a competent operator cannot be had. With extra-peritoneal primary rupture into the broad ligament in the early weeks of gestation, producing hematocele, if absorption fail, then perform cœliotomy or vaginal draining. If the child survives primary rupture into the broad ligament, let the fœtus live, keeping the patient under strict observance, ready to operate at any time when the life of the patient demands it or when the fœtus has reached a viable age. Surgical interference should be the rule in all cases of ectopic pregnancy reaching full term, even after spurious labor and the death of the fœtus. After the operation, never give opiates; have the bowels well moved early by salines and enemata; no food, only sips of warm water until the bowels are moved and vomiting ceases. Early catharsis relieves pain, nausea and prevents intestinal obstructions. He has never regretted giving cathartics early after operation, but has seen the evil effects of delay.

Dr. W. Reynolds Wilson contributes a paper on "Uterine Thrombosis Following Post-partum Hemorhage and Its Relation to Puerperal Infection."

In this issue also appears a reprint of Dr. Oliver Wendell Holmes' classic essay on "The Contagiousness of Puerperal Fever," this year being the semi-centennial of its publication.

THE CHICAGO MEDICAL RECORD FOR JUNE

contains a paper by Dr. F. C. Hotz on

The Importance of Early Mastoid Operations in Acute Suppurative Otitis.

If the mastoid inflammation is not relieved after a week's trial of antiphlogistic measures (such as blood letting or leeches behind the ear, the douching of the tympanic cavity with warm boric acid solutions, etc.), the author thinks that it may be taken for granted that by this time the mastoid antrum is filled with pus, and that this pus must be removed if the patient is to get well speedily. Many surgeons perform the mastoid operation on the installment plan, so to speak. Where leeches, warm fomentations and other treatments have failed to give relief, they make a Wilde's incision, and wait a day or two for results; and when they are satisfied that this incision also failed to stay the inflammation, then they proceed to open the cells.

In operating the author prefers the chisel to the drill.

Dr. Charles Warrington Earle contributes a paper on

The Present Status of the Etiology of Whooping Cough and its Treatment with Bromoform

The author is satisfied of the bacterial origin of the disease, and states that with bromoform the paroxysms are diminished very greatly within three days after the commencement of treatment. It should be given in doses of from one-half drop to a child one year of age to two or three drops to children of five or six, suspended to some mucilaginous vehicle. Syrup or water should not be added to the prescription, but glycerine may be used in any quantity without precipitation. Its action is somewhat similar to that of belladonna. The author believes it controls very largely the nervous element in this disease. It has not any germicide properties. It is useful in the second stage, diminishing the number of paroxysms and in this way bringing the disease under control, which, to say the least, excites our solicitation and makes us fearful of complications where the paroxysms are from twenty to thirty each day. Previous to the time that his attention was called to bromoform, the author had relied almost entirely upon fumigations, using tincture of iodine and carbolic acid. With the bromoform to combat the neurotic tendency and the fumigations of carbolic acid and tincture of iodine to destroy the micro-organisms, we have a treatment which promises more than any other combination of remedies. It is quite probable that the action of bromoform and belladona may be somewhat similar, but as between the two remedies the bromoform has given the better results.

Dr. C. S. C. Plummer contributes a paper on

Punctured Wounds of the Feet,

being a report of two hundred and three cases treated at the Medical Bureau, World's Columbian Exposition, during the "Construction Period," June 1st, 1891, to May 1st, 1893.

Although treatment varied much in different cases, the routine treatment finally agreed upon as being applicable to most cases and followed by the best results, was as follows:

1. Thorough cleansing of the foot with solution of bichloride of mercury 1-1,000.
2. Trimming the edges of the wound.
3. Swabbing out the wound with a probe lightly covered with cotton and dipped in 95 per cent. solution of carbolic acid.
4. Drainage.
5. Antiseptic dressing.
6. Rest.

Other papers in this month's issue are: "The Treatment of Typhoid Intestinal Hemorrhages" by Dr. A. A. Knapp, in which the author advocates the administration of a hyperdermic injection of a quarter grain of sulphate of morphia, followed by powdered opium in one grain doses every hour while awake, unless the respirations fall below twelve per minute. The paper includes a report of cases in which the treatment was used. Dr. A. E. Hoadley presents a paper on "The Importance of Early Mechanical Treatment of Hip Joint Disease." The issue concludes with a letter from Dr. Keeley in which he denies the truth of the statements of Dr. Chauncey F. Chapman in his paper on "The Bichloride of Gold Treatment of Dipsomania" (a notice of which was published in The Medical and Surgical Reporter for March 25th, 1893), and the reply of Dr. Chapman, in which he affirms that his statements are, in the main, true.

PERISCOPE.

THERAPEUTICS.

Heat and Chloroform.

Decomposition of chloroform by the pres- ice of light and heat from an open fire, not freqently occurs and is disagreeable to oper- tor, assistants, attendants and patient. Lit- e has been known about the matter until le *Medical Press and Circular* in a recent sue called attention to the danger. In ecember last, in this city, during an opera- on for hemorrhoids, chloroform being the æsthetic employed, the operator, anæsthe- zer and attendant began to cough violently; is was accompanied with irritation and atering of the eyes and dry and irritated throat, and a strong and pungent odor of free chlorine was noticed. The cough and discomfort in eyes and throat continued for a considerable time after leaving the operating room. It was supposed that the chloform was impure, and the bottle with what remained of its contents was sent to the manufacturer, Dr. Squibb, of Brooklyn, who reported, after analysis, that it was entirely pure. It was then remembered, that, as it was a cold day, an oil heating stove had been burning during the operation. This fact Dr. Squibb considered as the cause of the decomposition of the chloroform with evolution of free chlorine. The patient in this case suffered no discomfort whatever.—*Medical Review.*

Creolin a Mixture of Crude Carbolic Acid and Resin Soap.

From a trade circular issued by Dr. F. Raschig, a competent chemist and manufacturer, we learn that,

"Creolin is nothing more than a mixture of about 2 parts crude 20 per cent. carbolic acid and 1 part resin soap, and consequently contains about 10 to 15 per cent. of crude carbolic acid—to which solely it owes its disinfectant power."

This positive and trustworthy statement is made to counter the specious claim by the creolin manufacturers that their product is "made from coal-tar creasote free from all carbolic acid." Dr. Raschig lends emphasis to the exposure by pointing out that "coal-tar creasote and 20 per cent. crude carbolic acid are identical"—thus "hoisting by their own petards" his opponents in the argument.

Creolin has done good service, but is now excelled by lysol.—*Notes on New Remedies.*

Prentiss (D. Webster) on the Effect of Pilocarpine in Changing the Color of the Hair.

Having used pilocarpine with great success in a case of uræmia, Dr. Prentiss was much interested to note its effect on the patient's hair. The drug was administered by the hypodermic method in doses of one centigramme, and the total amount injected (in two or three days) was forty centigrammes. The hair, which previous to this time had been light brown, began rapidly to change its color to dark brown, and later became black. It also became coarser and thicker. These changes occurred not only in the hair of the head, but also in that of other parts of the body. The author states that two cases of a similar effect—though less marked—have been recorded, and speaks of the occasionally marked effect of pilocarpine in promoting the growth of hair.—*Med. Rec.*, April 15, 1893.

MEDICINE.

The Treatment of Malaria by Means of Potassiun or Sodium Nitrate.

Dr. Peter Buro in "Deutshe Med. Zeitung," having experimented with the above salts in the treatment of malaria, reports the following:

1. The nitrate of potassium and the nitrate of sodium are specific remedies in typical malarial intermittent, whether it assumes the quotidian, tertian or quartan form.
2. Both salts manifest an exact action but the sodium salt has the advantage of being free from the slightly toxic effect of potassium.
3. The usual single dose for adults is from 15 to 24 grains, which may be given in either the febrile or afebrile stage.
4. A decided advantage of these salts is that they exert no ill effect upon the digestive organs or nervous system, nor do they produce any untoward results.

Tincture of Iron for Burns.

Dr. E. F. Starr, in the *Atlanta M. and S. Journal*, recommends the application of the tincture of chloride of iron, by means of a feather or soft brush, as a prompt and efficient remedy for recent burns. The application should be made as early as possible, and should be done thoroughly, moistening it everywhere. Where the cuticle is not destroyed or removed, it should be used full strength; if the cuticle is gone, dilute with water one-half or two-thirds.

If used early in scalds and superficial burns it not only allays the pain but prevents blistering.

The Iodine Treatment of Goitre.

Dr. E. Nazaries, *Bulletin de la Societe de pharmacie de Bordeaux*, Feb., 1893; *American Journal of Pharmacy*, May 1893), remarks that, while iodine has long been used in the treatment of goitre, he has met with unqualified success by a particular method of its use. He dissolves from 75 to 90 grains potassium iodine, and from 20 to 30 drops of tincture of iodine in about 5 ounces of distilled water. A spoonful (whether teaspoonful or tablespoonful, not stated) of this solution is diluted with a pint of water, and this amount taken daily, during and after meals. The author insists on the continued internal use of the drug.—*N. Y. Med. Jour.*

Diagnosis of Apoplexy.

Mills (*Polyclinic*) based the diagnosis of apoplexy on the following points:

1. The sudden fall with unconsciousness at once, no injury perceptible, face white.
2. Respirations stertorous, noisy, puffing cheeks, tendency to Cheyne-Stokes, interrupted, improved by turning on side.
3. Right face droops more, and right cheek flaps more than the left. Right pupil widely dilated; left contracted. Retinal veins distended. No rotation of head and eyes to one side.
4. Pulse full and slow; temperature subnormal.
5. Convulsive movements noted at first have ceased; both arms and legs drop lifeless equally. Left side was paralized first. Sensation almost completely abolished.

SURGERY.

The Surgical Treatment of Cholera.

Five cases have up to the present time been published in which cholera was treated surgically. M. Lambotte operated upon two patients last autumn. The abdomen was opened in the middle line, and the bowel sown to the wound, incised and flushed out with a solution of corrosive sublinate (1 in 3000) by means of an india rubber tube one metre long. Both patients died. A Russian physician, M. Meerovitch, of Ekaterinodar, operated upon three patients last August

Only a small puncture was made into the bowel, which was not stitched to the wound. From 2000 to 3000 grammes of a solution of tannic acid were injected in two of the cases and 4000 grammes of a solution of thymol in the third. In all three cases there was a fleeting improvement in the symptoms, but all the patients died.—*Bost. M. & S. Jour.*

Tropical Suppurative Hepatitis.

Surgeon Patrick Hehir, of the British Indian Service, formulates, in the *Indian Medical Gazette*, the following pathological classification of cases of hepatic abscess:

(1) By far the most common are cases occurring consecutive to dysentary, and arising from a secondary infective process affecting the liver through the portal circulation. These cases arise from:

(*a*) The action of septic organisms, such as the streptococci, staphylococci, micrococci; or

(*b*) The irritation of the products of such septic organisms—ptomaines, conveyed to the liver from the ulcerated bowels and acting primarily on the liver, which plays the part of a filter upon the blood conveyed to it by the portal vein, or to the irritation of the amœba coli or cercomonas intestinalis, or both combined. Cases due to malarial poisoning, the blocking up of the radicles of the portal vein by the plasmodia of Laveran, these organisms acting as irritants and lighting up the suppurative process.

(2) Acute sthenic parenchymatous inflammation resulting from climatic causes, overcrowding, alcoholic excesses, excessive heat or chill, acting upon a liver already in a partial state of disorganization.

(3) Idiopathic cases in which no assignable cause can be traced.

Intestinal Anastomosis.

Murphy describes an "anastomosis buttom."

It consists of two small circular bowls made of bone. In one bowl is fitted a small cylinder with a female screw-thread on its entire inner surface. In the other bowl is fitted a smaller cylinder, of a size to slip easily into the female cylinder. On the inner surface of the lower end of the male cylinder two small brass springs are fixed, which serve to hold the bowls together when the male cylinder is pressed into the female cylinder. In the side of each bowl are four openings which serve for drainage. The whole button has the form of two hemispherical bodies held together by invaginating cylinders. These hemispheres of the button inserted in slits or ends of the viscera to be erated upon. A running thread is placed ound the slits in the viscus, so that when is tied it will draw the cut edges within the asp of the bowl. A similar running thread is plied to the slit in the viscus into which the her half of the button is inserted, and the owls are then pressed together. The pres-ure-atrophy at the edge of the bowl is pro-uced by a brass ring supported by the spring. he opening left after the button has berated itself is the size of the button. For this device the inventor claims the following advantages: (1) It retains its position automatically; (2) it is independent of sutures; (3) it produces a pressure-atrophy and adhesion of surfaces at the line of atrophy; (4) it ensures a perfect apposition of surfaces without the danger of the displacement; (5) it is applicable to the lateral as well as to the end-to-end approximation; (6) it produces a linear cicatrix, and thus ensures a minimum of contraction; and (7) it it extremely simple in its technique.

Three cases of cholecysto-enterstomy with this device are reported with apparent good results, In one case the time occupied by the operation was eleven minutes. Other experimental operations on animals are reported as having been done successfully. These include cholecystic-enterostomy, gastro-intestinal anastomosis and entero-intestinal anastomosis.—*Bost. Med. and Surg. Jour.*

Bloodless Amputation at the Hip Joint.

Dr. Senn has described a new method, devised by him, for the bloodless amputation of the hip-joint (*Chicago Clinical Review*). The following conclusions are presented by the author, as embodying the advantages of this operation: 1. Preliminary dislocation of the head of the femur and clearing the shaft of this bone of all soft tissues down to the proposed line of amputation through an external straight incision requires less time, is attended by less hemorrhage and shock than when this part of the operation is done after circular amputation, as advised by von Esmarch and others. 2. The external straight incision is the same as the von Langenbeck incision for resection of the hip-joint, differing only in length. 3. After dislocation of the femur the soft tissues are tunnelled with a hæmostatic forceps which is entered through the external wound on a level with the trochanter minor to a point on the inner aspect of the thigh behind the adductor muscles and about two inches below the ramus of the ischium, where a counter-opening two inches in length is made. 4. Bloodless condition of the limb should be secured by elastic compression or vertical position prior to tying the elastic constrictors. 5. An elastic tube three-quarters of an inch in diameter and about four feet in length is grasped with the force in the center and drawn through the tunnel made by the forceps. 6. After dividing the elastic tube in the centre the base of the thigh is constricted by drawing firmly and tying the anterior constrictor in front of the anterior section, while the posterior constrictor after being drawn tight behind the posterior section the two ends are crossed and then made to encircle the whole thigh, when the ends are again drawn firm and tied or otherwise secured above the anterior constrictor. 7. A long and short oval cutaneous flap should invariably be made in all amputations at the hip-joint. 8. In perference a long anterior and a short posterior flap should be selected. 9. The transverse section through the muscles should be some what conical in shape, the apex of the cone corresponding to the tunnel made by enculeation of the upper portion of the shaft of the femur. 10. Resection of the end of the sciatic nerve and ligation of all vessels that can be found should be done before the removal of the constrictors.

The femoral arteries should be secured by a double catgut ligature spread half an inch apart, the one portion on the proximal side including also the accompanying vein.

The posterior constrictor should be removed first, and all hemorrhage arrested by ligation and compression before the anterior constrictor is removed. 13. The upper part of the wound corresponding to the acetabulum should be drained with an iodoform gauze tampon, and the remaining part of the wound by one or more tubular drains.—*Med. Record.*

OBSTETRICS.

Conception on the Fourth Day of Childbed.

Kronig (*Centralbl. f. Gynak.*, No. 19, 1893), related an extraordinary and instructive case at a meeting of the Leipzig Obstetrical Society. A woman, now twenty-two, healthy and regular before her pregnancies, bore her first child on July 4, 1892. It was weaned on the tenth day, and is still living. On July 8, the fourth day of the puerperium, the patient had connection and then abstained for three months from coitus. The period did not return. In November, 1892, the motion of the child was felt. It was born on March 10. It seemed as though it had reached term, yet it had come into the world 243 days after the only connection which had occurred since the first confinement, or twenty-seven days—practically a calendar month—before the normal average of 270. It was over twenty inches long and weighed nearly seven pounds twelve ounces.

The shortness of the pregnancy was very remarkable, but the conception on the fourth day of the puerperium was still more notable. Ovulation, according to current theories, is entirely suspended during pregnancy, and does not recommence until, or a little before the first period, which occurs between the sixth and eighth week after delivery in women who do not suckle. If ovulation was delayed so long in this case, the spermatozoa must live long; Bozzi certainly found them living seventeen days after coitus, in the posterior vaginal fornix: but in Kronig's case this delay of conception to the first period would have made the pregnancy much too short to allow of the birth of a well-formed child.

In short, ovulation went on quite independently of menstruation. How the impregnated follicle could find a fit place of attachment on the inner surface of the uterus is a more mysterious question. Yet the glandular structures developed during pregnancies are often completely shed by the third or fourth day after childbirth, so that there is soon enough normal endometrium to lodge a fresh ovum. It is evident that spermatozoa can live in the lochia.—*British Med. Journal.*

A Valuable World's Fair Book.

The Passenger Department of the Baltimore and Ohio Railroad Company has prepared for general distribution a handsome pamphlet descriptive of the scenic and other attractive features of that road from New York to Chicago. This book should prove invaluable to those visiting the World's Fair. In its artistic cover, illustrations and reading matter, it is fully up to the high standard which has been fixed by the B. & O. for publications of this character. The scenery en route, which has gained for the B. & O. the richly deserved sobriquet of "Picturesque," the public buildings at Washington, old Harper's Ferry, Luray Cavern, and other attractive points are faithfully portrayed. The value of the publication is increased by descriptions and illustrations of the principal buildings at the World's Fair. This book can be procured free of charge upon personal application to ticket agents, B. & O. R. R. Co., or you can have it mailed to you by sending name and address with five cents in stamps to Chas. O. Scull, General Passenger Agent, Baltimore, Md. World's Fair tourists should bear in mind that the B. & O. is selling tickets at very low rates good going via Washington and returning via Niagara Falls.

Deer Park and Oakland.

To those contemplating a trip to the mountains in search of health and pleasure, Deer Park, on the crest of the Allegheny Mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Allegheny range. The hotel is equipped with adjuncts conducive to the entertainment, pleasure and comfort of its guests.

The surrounding grounds, as well as the hotel, are lighted with electricity. Six miles distant on the same mountain summit is Oakland, the twin resort of Deer Park, and equally as well equipped for the entertainment and accommodation of its guests. Both hotels are upon the main line of the Baltimore and Ohio Railroad, have the advantages of its splendid Vestibuled Limited Express trains between the East and West and are most desirable resting places for World's Fair tourists. Season Excursion tickets, good for return passage until October 31st, will be placed on sale at greatly reduction rates at all principal tickets officers thoroughout the country. One way tickets reading from St. Louis Louisville, Cincinnati, Columbus, Chicago, and any point on B. & O. system to Washington Baltimore, Philadelphia, or New York, or vice versa, are good to stop off at either Deer Park or Oakland, and the time limit will be extended by agents at either resort upon application.

The season at these popular resorts commences June 15th.

For full information as to hotel rates, rooms, etc., address George D. DeShields, Manager, Deer Park, or Oakland, Garrett County, Maryland.

THE MEDICAL AND SURGICAL REPORTER.

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ORIGINAL ARTICLES.

DIPHTHERIA*

T. J. HAPPEL,† A.M., M. D.

I venture to call attention to this malady not so much with a view of throwing new lights upon an old subject as for the purpose of eliciting a discussion and a comparison of views entertained in regard to the disease as it manifests itself in Tennessee.

In different parts of the State during the year 1892 the existence of diphtheria was reported. The county of Gibson did not escape. But one case occurred in my own practice, but I was called in consultation to see cases treated by three other practitioners near Trenton; the cases being distant respectively five, six, and ten miles from Trenton. I submit a brief history of these cases and then draw my conclusions.

Sept. 2, 1892, I was called in consultation to see the three children of Mr. V. The family lived on an elevated point, within 200 yards of an old saw-mill which had been abandoned for eight or ten years. The sawdust that had accumulated at that point lay rotting year after year, affording a nice playing place for children, and was no doubt so utilized by them. Otherwise the place presented as good sanitary surroundings as are usually found about country farmhouses. I found the children aged 11, 6 and 4 years. The oldest attended a neighborhood school, and four days since, though a little unwell, was at her place as usual, but came home that evening sick, having high fever.

During the night Dr. M. was called, but did not see the case until the next day, the family supposing the attack an ordinary chill. Dr. M. at this visit regarded the attack as malarial fever with catarrhal symptoms, accompanied by a slight tonsillitis. The next day he found the second child also sick, and the symptoms calling attention more to the throat, he found tonsillitis with extensive exudation in both cases. The next day the exudation assumed the form of pseudo-membrane and extended posteriorly and laterally over the fauces, and anteriorly along the soft palate in the first case, but not so extensively in the second. The temperature and pulse had both decreased in the first case, falling slightly below normal, and in the younger the temperature was normal. I was called on the fifth day of the disease in the oldest child, being the third day in the second.

An examination of the throat of the oldest revealed pseudo-membrane on both tonsils, not quite meeting in the median line posteriorly, and the one on the left side extending anteriorly along the hard palate fully two inches, loosening along the anterior edges, and appearing to be about one and a half lines in thickness.

Case 2 showed patches of false membrane about the size of a nickel on each tonsil, extending downward and toward the middle. This child claimed not to be sick, wanted to play about, with a pulse of 120 and a feeble, anæmic look. Face pinched and white. The same could be said as to the appearance of the oldest child, but she admitted that she was sick, and was willing to lie in bed, being easily exhausted by any exertion.

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* Read before the Tennessee State Medical Society, 1893.

† Ex-President Tennessee State Medical Society; President Western Tennessee Medical and Surgical Association.

The youngest child was a little hoarse, with slight fever, but was able to play about. His throat revealed no patches, only a redness. and slightly enlarged condition of both tonsils. Under a mopping of the throat of the eldest girl (having first used a wash of peroxide of hydrogen full strength, and then following with a solution of papoid), in an effort of coughing, the whole of the large part of this membrane attached anteriorly to the hard palate was detached and coughed out, leaving a raw and, in a few points, bleeding base.

In the other child's throat nothing was detached under the same treatment, though very decided action resulted when the peroxide was brought in contact with the false membrane. Both children were much tired by the application. These children had been treated up to that time with quinine, and aconite and gelsemium when temperature was above normal, and the throats had been mopped with listerine alternated with a saturated solution of chlorate of potash, which latter remedy had also been administered internally. Neither child had any desire for food, and none had been forced on them.

It was agreed first that all clothes, mops, etc., used about the throat, or upon which any of the secretions from the throat were received, should at once be burned. That in the absence of an atomizer, applications should be made to the throat by means of soft mops made of absorbent cotton. Second, that the disease should be treated locally with applications of peroxide of hydrogen (Marchands) followed at once by a solution of papoid. Third, that as internal remedies, alcohol in different forms should be given as demanded by each case. Fowler's solution of arsenic was ordered every four hours. Fourth, the youngest child was ordered sent to a relative, who had no children, with directions to mop the throat with a solution of persulphate of iron and chlorate of potash, and given full doses of quinine three times a day. Fifth, all children were ordered to be kept away from contact with the cases.

Sept. 4th. The appearance of the throats of both the children had improved, except that the membrane, much thinner and smaller every way, had been reproduced over the portion of the palate of the oldest child from which it had been removed. Temperature subnormal in this case with a slow feeble pulse, complete anorexia, and decided aphonia; very weak. The second child was better in every way.

Sept. 6th. Throats of both cases improved so far as pseudo-membrane was concerned. Pulse and temperature in the oldest child subnormal. Deglutition difficult with a tendency on the part of drink and food to return through the nose, prostration great, with a loathing of food. It was decided to add to her treatment a pill of iron, quinine, and nux-vomica, with phosphorus, and to press alcholic stimulants. Prognosis in this case very grave. The second child improved in every respect. No delopment of disease in the third.

Two days later, gangrenous symptoms supervened in the first case, and two days later sloughing began. The child died suddenly from heart failure on the fifth day after my last visit. The other child slowly recoverd. The third child did not develop the disease.

On Sept. 6th, I was called in consultation with Dr. M. to see a two year old child of Mr. T., who also lived not far from an old saw mill. A few days before, the little boy was found with fever, a sore throat and developing croupy cough. Dr. M. reported that when he called he found a slight tonsilitis, with pharyngitis, also a laryngeal cough. At that visit he found no membranes. At his next visit the symtoms were the same but membranes could be plainly seen. I was called the next day. I found the child playing on the floor. There was a stridulous cough and a shrill respiration which could be heard outside of the room. Temperature and pulse almost normal. I discovered membranous patches on both tonsils. There were no other children in the family.

The treatment locally consisted of a spray of peroxide of hydrogen followed, as in the first case, with a solution of papoid. Dr. M. had been using sulphur by insufflation. This was continued.

Quinine 2 to 3 grs. every 4 hours, to be alternated at the same intervals with mercuric bichloride gr. $\frac{1}{48}$. Egg-nogg, milk punch and toddy were directed to be freely used. At the third visit, tr. ferri mur. was added to the foregoing treatment. The spraying was kept up regularly till every trace of the membranes had disappeared. The bichloride was not suspended till, in addition to the disappearance of the membranes, the laryngitis had subsided. Dr. M. had just prior to this one lost two patients in the same neighborhood.

Nov. 6th, saw, in consultation with Dr. K., Miss B., aged 11 years, presenting a well developed case of diphtheria with slight laryngeal symtoms. She, too, lived not far from an old saw mill. Temperature for a few days was high, but had fallen to about normal; pulse frequent, feeble, and irregular; prostration decided. Her treatment consisted of the same spraying and mopping, alcoholics and nutrition, with scrupulous regard for cleanliness, and Tr. Ferri Mur. gtt. 4 every four hours with ℞ : Hydrarg. Bichlor. grs. 1, Liq. Arsenici Chlor. drams 1, Acid Muriate, dil. drams 2, Glycerinæ, drams 3, Aquæ q. s. oz. 4, M.et ft. mist. Sig.: Teaspoonful every four hours; alternate with the iron.

From the adoption of this treatment her improvement was steady but slow. At the end of two weeks all traces of the disease except extreme debility had disappeared.

My own case, occurring in Trenton, was milder than any of those reported and recovered on about the same treatment, except that the throat was treated with a solution of persulphate of iron and chlorate of potash.

During the prevalance of this disease, a number of cases of diphtheritic croup attached children under two years of age. Tracheotomy was performed in at least four (4) of these cases with fatal results in all. The cases not operated on as a rule died also.

I have thus briefly reported these cases to invite your attention to some thoughts upon the disease and more especially upon its treatment.

According to the latest writers upon the subject, diphtheria is due to a specific germ, the Klebs-Loeffler bacillus. This statement is made on the ground that in cases of diphtheria the pseudo-membrane is found inhabited by vast colonies of this bacillus. Yet our same bacteriologists admit that membranes are found in many cases which cannot be distinguished by appearance or anatomical characters from that of true diphtheria except by the absence of the Klebs-Læffler bacillus; ergo, no case of diphtheria can be positively diagnosticated without the aid of a microscope. Again, in *L'Union Medicale,* Nov. 14th, 1892, Roux and Versin state that in fifty healthy children examined in Paris and elsewhere in France, they found in the mouths of twenty-six of these children "a bacillus which, in a morphological point of view, is identical with the Klebs-Lœffler bacillus." The difference which they could discover was not in its individual form nor in the form of its colony, but only in the numbers of its colonies. This being true, does it not at once raise the question, or rather establish as a fact, what is stated by them to be a belief "that this harmless bacillus is none other than the Klebs-Lœffler bacillus deprived of its virulence?"

A search for this bacillus might reveal its presence much more common, and might carry the etiology of the disease to this point. "This Klebs-Lœffler bacillus exists in the secretions of the buccal surfaces of many persons, and when brought in contact with a *tertium quid*, causes the secretion by these bacilli of a tox-albumen which is absorbed, resulting *first*, in the manifestation of local disease and, *afterward*, a blood-poisoning resulting in constitutional symptoms." I simply suggest this as the probable etiology of the disease. The facts are as stated. These bacilli are found in the mouths of healthy persons. They are also found in pseudo-membranes which are not considered diphtheritic simply because when the bacilli are secured from that source and cultivated, or innoculated, they neither develop large colonies nor produce local trouble; and yet the microscope cannot differentiate these bacilli from those found in the most malignant cases of diphtheria. If this be a solution of the question, I can account for the development of the cases appearing in Gibson County during the past year upon the supposition that in nearly every case the rapid decay of the old saw-dust, which was near every neighborhood in which any case developed, furnished the pabulum on which the bacilli grew and multiplied.

In connection with the Klebs-Lœffler bacilli, the microscope, according to Roux and Versin, shows also staphylococci and streptococci pyogenes in the meshes of the membrane. The bacilli either live in, or cause the production of the pus, which is found intermixed in the pseudo-membranes. For these we will have use later on in the treatment.

It has been further proved by Klebs-Lœffler, Roux and others that if cultures of these bacilli are filtered through a porcelain filter no bacilli are found in the filtrate, and that this filtrate solution injected causes no local manifestation of diphtheria but develops the constitutional disturbances seen so often in the disease. If the solution is strong or considerable in quantity, death rapidly supervenes, but if less in degree, the animal "lives longer but suffers from paralysis;" hence, the statement already made that these bacilli generate a tox-albumin as they grow, which gives rise to the constitutional symptoms. So much for the etiology of the disease.

Prognosis. The statistics of the mortality differ widely. The reports from many of the best hospitals give the rate at from 31 per cent. to 47 per cent., but widely different are the reports in private practice. Dr. John M. Boyd, of Knoxville, Tenn., in 1888, at the Tennessee State Medical Society, read an article on diphtheria and veratrum viride, as the basis of treatment, in which he used the following language: "In the six years since, sixty-seven cases have fallen principally to my care, and a number of others, in which I have had a consultant relation, and under its (veratrum's) timely use, its claims to the merits of extraordinary efficiency have never disappointed me." One practitioner in Washington City claims in private practice, fifteen successive cases without a death. (*Va. Med. Monthly*, Feb. 1893, page 908.) Osler holds that in hospital practice the disease is very fatal but that in private practice, except in very malignant epidemics, the prognosis is very good.

My own experience with the disease, whilst limited, is not favorable. Almost without exception the cases of diphtheritic croup where the presence of membrane was fully proven, were fatal. I admit that one or two recovered out of twelve or fifteen cases seen and reported, but no membrane could be demonstrated except in one case.

In a discussion of the question of membraneous croup, which took place in the Gibson County Medical Society this year (1893), the members speaking to the question and taking the position that membraneous croup and diphtheria were identical, reported a number of cases which had come under observation. One member reported seventeen cases of diphtheritic croup met with in a series of years, all fatal; another, five cases with four deaths; another, five cases in which tracheotomy had been performed, all fatal; another did not give the number of cases but reported all fatal. The mortality was at least twenty per cent of those cases seen by, and reported to me in the fall of 1882.

This wide difference of results can be accounted for only upon the supposition that many cases are diagnosed diphtheria which are only cases of tonsilitis, or of pharyngistis with an exudate not a false membrane. These exudates *sometimes* so closely resemble the diphtheritic membrane that the eye cannot distinguish them, yet the microscope promptly shows the difference, while the simple test of agitating them in warm water would give strong proof for or against the disease;—the exudate generally readily dissolving, or at least separating into small fragments, whilst the diphtheritic membrane will not. Of course, the "whiping off" test with soft absorbent cotton will aid very materially in making a diagnosis

TREATMENT.—This should be local and constitutional, in accordance with the modern ideas of the disease. Remedies for local application have been almost as numerous as are pharmaceutical preparations. Without attempting to discuss the merits or demerits of the large majority I would simply call attention to those that I have found useful. In the first place I put peroxide of hydrogen. The fact that we find in these pseudo-membranes streptococci pyogenes—the pus generating cocci—and that pus is held in the meshes of this membrane, and the further fact that has been proven beyond cavil, that it hunts out, combines with and decomposes these pus globules proving at the same time a germicide of the highest type, Hydrogen Peroxide becomes then the application *par excellence* in these cases. This I use if I can, first with a soft mop made of absorbent cotton, and then, in order that I may not fail to reach membranes hidden from sight, I follow by a spray of the same through the anterior nares and mouth. In young children, I use the spray alone to avoid so much worry. I use the reagent undiluted unless I find it irritating; then I dilute as little as possible.

After a few moments rest, with another mop I saturate the membranes wherever visible, with a solution of papoid, (vegetable pepsin) nine grains to the drachm. This, in my hands has proven a powerful solvent of these membranes. These applications are repeated in bad cases every two hours, in milder ones every four hours.

I cannot say that I have gotten any benefit from solutions of iron or chlorate of potash locally in these cases, though I frequently use the potash solution as a gargle with children old enough to use it. In some of my cases I caused sulphur to to be blown into the throat to satisfy a popular prejudice, at the same time hoping that it might be converted into sulphurous acid and act as a germicide or by attrition at least aid in wearing off the membrane. Externally I make stimulating applications to the throat.

Recognizing that this disease rapidly becomes constitutional I open up the alimentary canal with a mercural purge and then direct that the secretions of bowels, kidneys and skin be carefully watched and kept normally active.

The high temperature of the first twenty-four or forty-eight hours demands antifebrine or some other of the phenol group of antipyretics, repeated as often as needed to hold the temperature down to or below 100.° Generally there are several days when heart sedatives may not be needed at all, but as the disease progresses it will become necessary to tone and reduce the frequency of the heart's action. This can best be done with digitalis and aconite combined, in small doses often repeated. Later on the aconite must be omitted, the digitalis kept up supplemented by alcoholics freely administered. Alcohol in some form becomes a most valuable adjuvant in the treatment of diphtheria.

As to constitutional remedies, bichloride of mercury stands first and should be given in full doses every four hours. For a child two years old, I do not hesitate to order one forty-eighth of a grain every four hours, but I should hesitate with so young a child, to go to the extent suggested by Osler, viz: one-half a grain in all, each day. Next in utility is tr. ferri. chlor. in doses of four to ten drops every four hours, for a child two years old, and two grains of quinine at the same time.

Third in value is placed liq. potasii arsenitis, or chloride of arsenic. Favorite prescriptions of mine are

℞	Hydrarg bichlor	1 grain
	Alcohol	q.d. ft. sol
	Liq. arsenici chlor	1½ drachms
	Acid, muriatici dil	2 drachms
	Potassii chloratis	3 drachms
	Aquae	q.s., 4 ounces

M. et ft sol.

Sig.—Teaspoonful in water every four hours.

Alternate with tr. ferri mur. in doses already stated every four hours.

I do not propose to refer to all other remedies used, but these have been found valuable in my hands. If, in the course of the disease, diphtheritic croup develops, then an atmosphere charged with the vapor of turpentine and eucalyptol is to be abundantly supplied to the patient, either by surcharging the air of the room by means of a vessel of boiling water containing these medicines (such can easily be arranged with a gasoline stove or large alcohol lamp) or the vapor may be conducted close to the child's face by wetting cloths in the mixture and hanging around the bed. In such cases an emetic will often be needed to dislodge the mucus from the trachea and bronchi. Ipecac in the form of the fluid extract has given me most satisfaction. I generally use it combined with belladonna. Belladonna is strongly indicated in these cases when the blood is not properly aerated.

The question of intubation or tracheotomy presents itself in most of these cases. From the failures in tracheotomy cases I would favor intubation. But it is not the province of an article of this kind to discuss the relative merits of either.

Whatever treatment is adopted, the result depends largely on the nature of the case, whether sporadic or epidemic, whether simple, mild, or malignant. If the etiology assumed is correct, the treatment suggested ought to prove curative. It has done good in my hands; hence I present it.

Sequelæ must be met as they arise, although it is better to prevent them by closely watching the case and resorting in time to proper remedies. For example: The timely use of strychnia, hypodermically or *per orem*, may prevent paralysis. Should it develop, no time has been lost and we are prepared to continue our treatment more regularly.

I have not entered upon the question of prophylaxis, because, in this enlightened age, no one can or will deny the absolute necessity for the adoption of the most thorough and careful preventative measures.

In conclusion, it must not be forgotten that we are dealing with a disease of which the virus or germ, or whatever the source of infection may be, is most tenacious of vitality, and hence, in all cases, everything used around a case of diphtheria should be thoroughly disinfected by heat dry or moist, fumigation with sulphur, washing with bichloride solutions, etc. These measures should include rooms, beds, bedding, clothing, etc. Cases have been reported of diphtheria developing in families which have moved into houses that, weeks or months before, had contained a case of diphtheria.

FUTHER OBSERVATIONS OF THE RELATION OF PELVIC DISEASE AND PSYCHICAL DISTURBANCES IN WOMEN.

GEORGE H. RHOE, M. D., CATONSVILLE, MD.

At the last annual meeting of this association, it was my privilege to report eighteen cases of removal of the uterine appendages in insane women, with the results following the operation. In supplementing my previous report with this brief paper, I desire to touch upon a feature of the question which has arisen in the interval; namely, the medico-legal relations of this work.

Of the eighteen cases reported last year, three had been discharged recovered at the date of the report. These cases up to the time of this writing, remain well and continue doing their daily household work. One other has been at home for seven months, not entirely well, but so much improved that she can be cared for outside of an insane hospital.

Another case (of seven years' residence in the hospital) has so much improved in disposition since the cessation of the periodical menstrual irritation that I look forward to discharging her from the hospital also.

Since last September I have operated on two additional cases, one of periodical maniacal violence, and the other of melancholia with loud complaints of intense headache. In both cases the ovaries were cystic. The former case has had no outbreak since the operation, but is still detained for observation, while the latter has been discharged entirely recovered, a recovery dating from convalescence from the operation.

The simple results of this work are therefore as follows:

Twenty operations (removal of the uterine appendages) upon insane women with pelvic disease. Eighteen physical recoveries from the operation, with improvement of the general health. Two deaths.

Four absolute mental recoveries and discharge of patients from hospital restraint. (2 thirteen months, 1 ten months, 1 two months).

Three with complete physical and partial mental recovery. (1 at home seven months.)

Seven show mental improvement, some of them of a very decided character, but none sufficient to justify discharge from the hospital.

Three remain in about the same mental condition as before the operation but are much improved physically.

One was removed from the hospital a few weeks after the operation against my advice, and then placed in an Asylum, where I am informed she has been growing worse mentally.

I may also refer here to a case of melancholia with suicidal tendencies, in which I repaired a badly lacerated cervix. The operation was followed by rapid restoration of the mental faculties and the patient was discharged recovered on January 31, 1893. She remains well at the date of writing.

At the time when I began this work I was simple-minded enough to think that the restoration of an insane-woman's mind was an object desirable in itself, even if it involved the loss of organs so unessential to physical life as the ovaries and fallopain tubes, and especially when these were in a state of disease. It seems however that certain influential members of the medical and legal professions regarded this as a grave and dangerous error and believed it a public duty to endeavor to check similar work which had been begun with encouraging success in one of the insane hospitals of Pennsylvania. The objections urged were based upon misconceptions of the scope and character of the work. The weightiest argument against it was an official legal opinion which pronounced it "brutal and inhuman, and not excusable on any reasonable ground." It was further declared to be "illegal and unjustifiable" and to subject the surgeon to "the risk of a criminal prosecution."

These declarations, coming from a lawyer of high standing, led me to pay some attention to this view of the question, and I sought by conversation and correspondence with leading lawyers of my own State, to learn what principles of law, in the absence of specific legislation, had any bearing upon the matter. The question in its specific form seems never to have been adjudicated in any court of record.

In the case of a sane person, courts have uniformly held that if a surgeon possesses ordinary professional knowledge, exercises ordinary skill, and uses ordinary care in the management of his case, no action of malpractice can lie against him. It is, of course, presumed that, in case of an operation, the consent of the patient shall first have been obtained, both parties acting in good faith, and the patient understanding the object and character of the operation. As a matter of course, likewise, any operation for a criminal purpose, even though with the consent of the patient, would not be justified by the courts. Here, as elsewhere, the law is guided by common sense—in the words of an eminent member of the Illinois judiciary, "The law *is* common-sense." The only medico-legal questions, therefore, which seemed to me to apply here were such as had relation to what constitutes valid consent.

With this view I drew up three questions and submitted them to one of the professors in the Law Department of the University of Maryland. The answers which follow are clear and comprehensive, and seem to me to require no further comment.

BALTIMORE, MD., MARCH 6TH, 1893.

DR. GEORGE H. ROHE, Catonsville, Md.

My Dear Doctor:—After considerable investigation I am prepared to answer the several questions submitted to me by you in your letter of February 17th.

"1. Is an insane person, having lucid intervals of greater or less duration, competent in law to consent to a surgical operation upon his or her body, the result of such operation being removal of certain organs or members not essential to life or health ?"

During a lucid interval a lunatic is, in the eye of the law, sane. 19th. Cent. L. J. 427.

The act of a lunatic, during a sane interval, has in law the validity of the act of a sane man.

Pope Law of Lunacy, 18.

Am. & Eng. Enc. of Law, Vol. 2. 112.

Buswell on Insanity, Sec. 17.

I answer, therefore, in reply to the first question that a lunatic, in a lucid interval, is as competent to consent to a surgical operation of any kind as is any person.

Of course, you readily understand that great care is necessary in determining whether or no the consent is given when there is an actual lucid interval, and the law cannot relieve a physician from the responsibility of exercising this care.

"2. In case the person above described is incompetent to legally give consent for the performance of such operation, can the recognized, natural or legal guardians of such persons give consent described ?"

According to the theory of law, the State, acting through courts of equity, is the guardian of all insane persons, both as to their persons and property. The equity court appoints a committee as its agent for the discharge of this duty. Such committee is the legal guardian of the person, and has the power to consent to such measures as may be for the lunatics benefit.

Pope Law of Lunacy, 111.

Md. Code, Art. 16, Sec. 96.

Rebecca Owings case. 2 Blands Chan. 272.

I answer, therefore, that the committee of a lunatic is competent to give consent for the purposes mentioned, assuming, of course, that he and the physician act in good faith.

The law does not recognize any such person as a natural guardian to a lunatic. The father, and, if he be dead, the mother, is the natural guardian of an infant, but the term is not applied to those who have control of persons non compos mentis.

"3. In case a person is always entirely insane have the natural and legal guardians the right to give the consent described ?"

I answer on the authorities cited in the answer to the previous question that the committee of an insane person has the right to give the consent.

I may further add, that, even though the committee may refuse, an application to the court of equity, which appointed the committee, would be entertained, and it would be competent for the court to give the consent.

"4. In case neither the patient himself, or herself, or his or her guardians, are competent to give the consent described, has the attending physician the power legally to decide: that an operation, as described above, shall or shall not be performed. In other words Dare a physician perform an operation on an insane person if the latter has no relatives living or known ?"

In answering this question it is important to bear in mind that no person can be confined until he has been adjudged insane by proper proceedings, or unless he be dangerous to himself and others.

Pollock on Torts, 108.

Rebecca Owings case, 1 Blands Chan. 272.

Fletcher vs. Fletcher, 28 L. J. Q. B. 134.

Anderson vs. Burrows 4 C. & P. 210.

Lock vs. Deane 108 Mass. 120.

Underwood vs. The People, 32 Mich. 1.

And in the case where confinement is necessary, because a person is dangerous to himself or others, the restraint must be temporary, and further proceedings immediately taken.

Brown on Med. Jur. Sec. 30.

Commonwealth vs. Kirkbride &c., 2. Breste, 398.

It seems, therefore, clear that a lunatic with no committee cannot against his wishes be detained for any purpose except to prevent him from injuring himself and others, and that his confinement being for that purpose only will not authorize the performance of a surgical operation.

I answer, therefore, that a patient confined without a committee cannot consent to a surgical operation, and the attending physician has not the power legally to decide that an operation is to be performed on such lunatic.

In connection with this subject there are several matters to which I would call your attention.

Surgical operations upon insane persons place the operating physician in a position of delicacy for several reasons. If he relies on the consent of the lunatic he is charged with the duty of determining whether the lunatic is or is not insane at the time of giving the consent. And it is probably true also that insane persons, who recover, are strongly disposed to hold persons responsible who have confined them for insanity, or who may have performed surgical operations on them while confined. Yet the law appreciates the delicacy of this situation. It does not relieve the physician of his responsibility, and of his duty to act with propor caution. It is for this reason that the central principle, in the modern law of insanity, is that the validity of any act of a lunatic depends on his capacity to perform the particular act in question.

People Exrel. Norton vs. N. Y. Hosp. 3rd. Abb. N. C. 229.

The law would, therefore, not exact so high a capacity in a lunatic to consent to a surgical operation, as it would to enter into a contract.

State vs. Housekeeper, 70 Md. 162.

Thus it has been held that a lunatic is capable of being a witness, although not capable of entering into a contract.

3rd. Abb. N. C. 229.

The physician himself must calculate the chances involved, and assume the responsibility of the propriety of the operation, instead of leaving this to the patient as in the case of a sane man.

Ewell on Med. Jur. 289.

A part of the responsibility, which the physician must assume, is to determine whether the insane person has that degree of capacity requisite to consent.

Before closing you will permit me to make some general remarks suggested by my reading and thought on this subject. The law hedges about every person with certain protection to his person, and it makes it the normal rule that no person can in in vitum be even touched by another. *A fortiori,* a surgical operation cannot be performed on a person without his consent. The exceptions relate to persons who are incapable of giving consent by reason of defect of capacity from infancy or insanity. In these cases the power is in the courts of equity to give the consent, and this power the court may delegate to guardians of infants, and committees of lunatics.

There are, however, undoubtedly cases in which, where there is no guardian or committee, emergencies arise or circumstances exist, which make it impracticable to apply to a court of equity. In these cases the surgeon should act with peculiar caution. If there are friends or relatives of the lunatic, he should, as far as practicable, consult with them, and he should, as far as practicable, avail himself of the judgment of other physicians. If none of these are available, he may in cases have to act on his own judgment and responsibility.

This, in my judgment, after a full reading of the subject, is clearly the position in which the law leaves the matter, and I cannot see that it would be wisdom to change it. If the law gave the surgeon greater power it might constitute a temptation to carelessness or to indulge in experiments.

It may be said that in this class of cases the physician is peculiarly liable to be sued by persons who have recovered or partially recovered their reason. On the other hand it should be borne in mind that the tribunals before such suits are tried, are fully apt to take this fact into consideration.

Very truly,
RICHARD M. VENABLE.

CLINICAL LECTURES.

VALVULAR LESIONS OF HEART, PULMONARY ŒDEMA, OLIGOCHROMÆMIA, SIMPLE ANÆMIA.*

CHARLES G. STOCKTON, M. D.,

This patient is an American aged 34; married. When fourteen she had inflammatory rheumatism with chorea following. She has had tonsillitis every fall since then. Otherwise her health has been good until four weeks ago, when her legs began to swell and she had a cough accompanied by considerable expectoration. Her father was killed in the army, her mother and one sister died of heart disease; otherwise the family history is good.

The history of acute articular rheumatism followed by chorea and several attacks of acute tonsillitis, is significant in connection with the fact that the patient has at present bruits to be heard over various points in the præcordium. In all probability the bruits were present during the attack of chorea. It is possible, indeed common, for people to live many years without knowing that they have a valvular lesion; which is not, therefore, necessarily a serious thing. It becomes serious when, for any reason, compensatory hypertrophy of the heart does not occur. Aortic insufficiency is, of all lesions, the most difficult to be compensated for; next comes mitral stenosis. Mitral insufficiency and aortic obstruction are usually quite well compensated for, provided the heart is well nourished and well innervated. These requisites can be brought about by maintaining the general nutrition and innervation of the patient by hygienic surroundings, regular but light occupation, exercise, proper food, sufficient sleep, and avoidance of excitement and dissipation. Freedom from acute and chronic diseases will enable a heart with valvular lesion to maintain its equilibrium when even a slight disturbance of the general health may be enough to retard the circulation, to produce pulmonary and general venous congestion, with cough, dyspnœa, dropsy, disturbed digestion, enfeeblement of the mental powers, etc. Sooner or later there comes a time when the equation between the valvular weakness and cardiac innervation and nutrition is lost. This hour may be delayed until the patient has reached the natural limit of years; it may follow a severe fever or a period of loss of sleep, overwork or excitement; it may be hastened by anæmia or some other constitutional state. It may be impossible to explain just why the cardiac power has failed at some particular time.

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*Record before the Buffalo General Hospital Medical Clinic.

During a fortnight, our patient's pulse has rarely been below 90, while the temperature has ranged irregularly between 98.5° and 102°; the respirations have varied from 30 to 50. This record alone points to some trouble with the lungs, because the respirations are increased proportionately to the pulse and the temperature. We can rule out acute inflammatory diseases on account of the comparatively low temperature. Respiration means not simply the bellows action of the lungs, but the interchange of gases between the red corpuscles of the blood and the cells of the tissues. The rapidity of respiration depends not only upon the capacity of the lungs to supply oxygen to the red corpuscles, but largely upon the demand of the tissues for oxygen and their necessity of giving off carbon dioxide. It is, therefore, not strictly correct to connect an accelerated breathing with pulmonary disability. The respiratory centre in the medulla which calls the lungs into play is stimulated by the presence of carbon dioxide in the blood. You may remember that, some time ago, I brought a patient before you with nothing wrong in the lungs, and with apparently well oxygenated tissues, yet respiration was accelerated and this rapidity of breathing was explained as due to Bright's disease, the retained toxines irritating the respiratory center. I lately saw another case of rapid breathing occurring in connection with puerperal convulsions of renal origin. In this case also there was no pulmonary lesion. The poisons which excite the respiratory center may not cause any elevation of temperature. Overstimulation of the respiratory centre may occur independently of any toxæmia, and I have reported several cases of rapid breathing of most alarming appearance, in which no organic disturbance could be detected, and which yielded to remedies administered on the hypothesis that the trouble was a neurosis.

But, knowing from the history of the case, of the existence of a cardiac lesion, in all probability of long duration, we naturally ascribe the rapid breathing to some pulmonary affection secondary to the interference with the circulation. The damming back of blood into the lungs is liable to produce œdema, as it would in any other organ. The prolonged congestion may have established a condition of brown induration in addition to the œdema.

On examining this woman's lungs, we find rales, sibilant and sonorous breathing sounds—which should be spoken of as rales—an imperfect respiratory murmur at the bases; dullness on percussion at the bases, becoming gradually less as we go upward, where the respiratory murmur becomes clearer. The rales and the sibilant and sonorous breathing increase as we ascend. There is expectoration of frothy mucus. On the right side the dullness amounts almost to flatness at the base, and the respiratory and voice sounds are distant. There is undoubtedly a little hydrothorax here.

So we have to do with brown induration and œdema of the lungs, bronchitis and slight pleural effusion on one side. The urinary examination is negative.

On examining the blood with the hæmato-spectroscope, we find a clubbing of the oxyhæmoglobin bands in the spectral field, indicating that the blood is imperfectly oxygenerated. Comparison of the blood with the color scale indicates that there is about sixty per cent. of hæmoglobin present.

The heart presents a double mitral murmur, showing that there is both stenosis and regurgitation, and dilatation is evident from the weak and wavy cardiac impulse discovered to the left of the nipple line.

The treatment is first to keep the patient warm in bed, in order to lighten the labor of the heart. Dry cups should be applied frequently over the chest to relieve the engorgement of the lungs, and the surface circulation should be stimulated by frequent hot mustard foot baths and by diffusible stimulants if necessary. Why do I mention these means before speaking of digitalis, strophanthus and similar cardiac tonics? Because it is better to lessen the venous engorgement of the organs before stimulating the heart; because it is better to draw the blood from the lungs than to force it through them; because by so doing, we not only relieve the lungs but diminish the obstruction offered to the right heart, thereby directly benefitting it. The left heart is also benefitted by bringing blood into the superficial capillaries and thus reducing the pressure in the larger vessels. There is danger in giving digitalis when there is weakness of the left heart, overdistention of the right ventricle, and opposition to the circulation from the congested organs. There is the constant tendency to think of what medicine we shall give. I want to impress the lesson that we must think how best to relieve a diseased condition without having recourse to drugs, by physiological means, by mechanical, electrical, hygenic or other non-medicinal treatment. In pneumonia and various other pulmonary troubles some, men advocate the use of remedies that deplete because, they say, you can not safely stimulate the heart. On the other hand, there is a class who say that it is dangerous to deplete the system. A third and larger class occupy middle ground, and advocate in the beginning depletion and other means that lessen congestion and later stimulants to sustain the heart.

Thus the blood is coaxed or drawn along at first, then pushed or driven forward by digitalis or alcohol if necessary.

The next patient suffers from a high degree of simple anæmia. By *simple* anæmia, I mean one that does not depend upon any striking abnormality aside from that of the red corpuscles. We always find anæmia following malnutrition from any cause, such as indigestion in its various phases, absence of proper food, many acute and chronic diseases. In distinction from simple anæmia, we find a class of anæmias associated with diseases of other organs, for example the spleen, liver, bone-marrow and lymph-nodes. These anæmias usually have peculiarities besides the condition of the red corpuscles. In simple anæmia, the red corpuscles are much reduced in number; they may be greatly increased in size and distorted. There is a relative increase in the number of white corpuscles and there may be an insignificant actual increase. Much light can be thrown on the nature of anæmia by studying the change in the number, form and size of the blood bodies.

There is another form of anæmia that depends essentially not upon the changes mentioned but upon a fading out of the red corpuscles, that is a deficiency in the hæmoglobin. This disease is called chlorosis because the skin of those affected is usually of a greenish color from the presence of the separated coloring matter of the red corpuscles. This coloring matter—the hæmoglobin—after being carried in the plasma, settles in the various tissues of the body and undergoes chemical change. The liver is almost invariably much darker than normal from the deposition of this pigment.

This patient presents marked evidences of anæmia in the pallor of the face, the conjunctivæ, the lips, the tongue and the gums, in short of all the accessible mucous membranes. Gingivitis, glossitis, conjunctivitis and other inflammations may obscure the anæmic condition of these membranes and, similarly, a lividity of the face from some obstruction to the circulation or an increase in the local blood supply from some disturbance of the sympathetic nervous system may disguise the pallor which we would naturally expect. The last patient, for example, although suffering from a diminution of hæmoglobin to the extent of 40 per cent., presented no marked pallor, but on the contrary some lividity. Thus the color of the skin and mucus membranes can not be relied upon as strictly diagnostic of the richness or poverty of the blood in all cases. But when marked pallor is present in connection with other symptoms, the diagnosis may be made quite positively. This patient is short of breath, her pulse is rapid, especially after exertion, and even the excitement of appearing in clinic is not sufficient to cause a flushing of her face, in spite of the acceleration of the pulse. In the absence of organic disease of the heart, lungs and other viscera, such as were found or suspected in the first patient, we must explain the acceleration of the pulse and respiration with reference to the condition of the blood. You remember that true respiration is carried on by the aid of the red blood corpuscles. In this case these carriers of oxygen are deficient in number and when the patient makes an exertion or becomes excited or in any other way calls for an activity of some organ, there is a demand for oxygen which can be supplied only by hurrying the red corpuscles through the vessels so that they may become recharged with oxygen in the lungs more frequently. Bearing in mind the importance of oxygen as a nutrient, you can readily understand that a deficiency of it, such as is inevitable in anæmia, will lessen the activity of every organ. There is commonly a sense of languor and an inability for mental exertion, there is a failure of the digestive power and the bowels are usually constipated. There is often a suppression of menstruation, which is conservative, since the body can ill afford a loss of blood. Even when the menses are not suppressed, as in the present case, they are deficient in color and usually scanty. For some reason that is not very clear, anæmia, especially when of high grade, is usually attended by a slight rise in temperature. This patient's chart shows a range between 98° and 101.5°. In special forms of anæmia, the temperature curve is quite typical, as in the intermittent temperature of leucocythæmia. In simple anæmia, the urine is usually highly acid, which is true in this instance. There has been considerable improvement in the last week, largely on account of treatment by iron. The girl has had one grain of Blaud's pills three times daily after eating. She is also taking alkalies, for in anæmia it is important not only to provide iron but to increase the alkalinity of the blood.

COMMUNICATIONS.

UTERINE THROMBOSIS FOLLOWING POST-PARTUM HEMORRHAGE, AND ITS RELATION TO PUERPERAL INFECTION.*

R. W. REYNOLDS WILSON, PHILADELPHIA.

Post-partum hemorrhage is followed by a series of consequences dependent upon thrombosis. The most conspicuous of these are phlegmasia alba dolens and pyæmic infection, although a general infection dependent upon the same cause is to be observed, as demonstrated by the histological study of the subject. In normal involution the contraction and retraction of the uterine muscle is sufficient to prevent bleeding from the sinuses by causing an approximation of the vessel walls. In the absence of normal uterine contractions, dependent upon want of muscular development, or upon loss of blood, as in placenta prævia, or upon over-distention from twins, or hydramnios, hemorrhage is prevented by the formation of the thrombi. On the part of the blood itself, the increase of fibrin, consequent to the loss of blood, is an important factor in thrombosis. This natural means for controlling hemorrhage approaches a pathological condition, in that it admits of an extension of the thrombi into the veins surrounding the uterus, namely, those of the parametrium and broad ligaments. In this way a direct communication between the endometrium and pelvic veins is set up.

In active involution the blood current is diminished, and the absorptive power of the veins and lymphatics is decreased, whereas in defective involution the amount of blood in the uterus increased, and the lympathic circulation called more actively into play. According to Winckel (1) the outcome of physiological thrombosis is described as a conversion of the thrombi by the immigration of wandering cells, probably with the aid of the endothelium and vaso-vasorum, into a firm connective tissue cord, which at times becomes canaliculated, possibly by the passage of red blood corpuscles, so that the blood current is restored. Thus, under the conditions in which uterine inertia exists, we have hemorrhage giving rise to increased tendency to inertia and to the formation of thrombi, which serve as a dangerous means of communication with the central venous circulation, and as a stimulation of the lymphatics surrounding them. Where elements of infection are absent the thrombi shut off the uterine cavity from the circulation, but where septic material is present they offer, when once affected by the putrefactive changes about them, a means of entrance into the system for the micro oganisms which attack them.

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* Read before the Philadelphia Obstetrical Society, May, 1893.

Bacteriological research has shown that the normal uterine lochia contain no germs, and may be injected into the body of any animal in any amount without injury. Doderlein (2) found that after a normal labor with a temperature not exceeding 98.4° there were no germs, but when fever was present bacilli and cocci were found until the temperature fell, being eliminated by the very abundant secretion, especially when this was purulent. Micro-organisms may find entrance into the uterine cavity by various means, and when in contact with the endometrium give rise to infection. It has been positively shown that the endometrium is the usual source of infection, for in puerperal ulcers of the vagina we have only a mild form of infection accompanying the local signs, and although the same micro-organisms are present as those which are found within the uterus in puerperal endometritis, they occur only at the seat of infection, and are not found penetrating into the neighboring tissues (3).

Having, therefore, a case of hemorrhage with the occurrence of dilatation thrombosis and the presence of septic material, we have the liability of infection, the process attacking the endometrium and spreading by means of the disorganization of the thrombi along the course of the veins, especially at the placental site, and invading the general circulation.

It will be of interest to study the means by which infecting germs find entrance into the uterus. These may be present before the occurence of labor in cases in which hemorrhage is likely to occur, their presence and the liability to hemorrhage being dependent upon the same cause. Namely, in cases of endometritis we have, as has been so forcilby maintained by Pozzi, the presence of pathogenic organisms, the prevailing species being staphylococci (pyogenes aureus, albus and citreus), and various kinds of streptococci. As to the part played by the uterus in cases of hemorrhage due to metritis and endometritis with the presence of the usual pathogenic organisms, Winckel states that a limited metritis, or premature fatty degeneration of the muscles of the pregnant uterus is likely to interfere with the contractile power of the affected area. Endometritis having existed during pregnancy, and present at the time, when uterine contraction and retraction are essential to the arrest of hemorrhage, predispose to bleeding; first, on account of the hyperæmia; secondly, by reason of erosion of already occluded vessels from the presence of mycotic elements; and thirdly, by interferencence with involution. The question arises, what determines the presence of micro organisms within the uterus in endometritis, and why, if in any such case their existence is proven, should puerperal endometritis and its consequences be the exception rather than the rule? The answer to this lies in the fact that the tissues of the genital tract possess, under normal conditions, a power of resistance to the pathogenic action of the germs which may be present. The vitality of these germs becomes more and more attenuated as they are acted upon by the normal secretions and cellular elements of the tissues. This antagonism of the tissues against the invasion of pathogenic germs continues as pregnancy advances, up to the time of the beginning of labor. The completetion of labor, marked by the expulsion of the placenta and discharge of liquor amnii, affords the natural means by which the genital tract is flushed out, and the possibility of the lodgment of germs is prevented. In pathological conditions, on the other hand, that is, in simple endometritis, in contra-distinction to puerperal endometritis, the mucous membrane becomes infected by the invasion of germs which are indigenous to the genital tract. According to Pozzi (4) there exists in the genital tract of the female a zone rich in micro-organisms, situated at the level of the internal os. The activity of this zone is increased by the general debility of all the tissues, which reduces cellular vitality, or by traumatism. In endometritis the mucous membrane becomes infected from this source, and the ordinary lesions and symptoms follow. In puerperal endometritis we may, in cases where hetero-infection may be excluded, ascribe the condition to an ante-partum infection dependent upon an earlier endometritis, the earlier pathological changes in the uterine mucosa and connective tissue predisposing to hemorrhage, by interfering with contractions, with infection of the resulting thrombi by the germs which are already present. In cases of atony from other causes (want of muscular development, over distention) the treatment which is used to avert the hemorrhage, and the necessary manipulations, may be responsible for the infection. Frequent examinations during the course of labor, hasty and careless manipulations at the time when the patient is bleeding, and carelessness of the principles of asepsis owing to the loss of self-control on the part of the attendant, and the introduction of infected instruments, all contribute to the risk of infection. There exist, therefore, under these circumstances, ample opportunities for the invasion of bacteria.

What, on the other hand, are the natural means of resisting these bacteria in cases of non-infection, and what are the local changes in septic cases, resulting from the action of micro-organisms? Immediately after the expulsion of the placenta the uterus contracts and obliterates the cavity recently occupied by the ovum. This contraction is influenced largely by the nervous condition of the woman, and may be considered as an active process. Under normal circumstances the innervation of the organ produces the active power of contraction irrespective either of the elasticity of the fibres or of the diminution due to shortening of the fibres by retraction. The blood supply is lessened by this contraction, and the vessels at the placental site are compressed by the uterine fibres and emptied of blood. Both the free contents of the uterus, namely, blood and the remaining amniotic liquid, and the adherent shreds of decidua are expelled. As soon as the tonic contractile power of the uterus is established, retraction of the muscle (fatty degeneration of the muscular fibres) and regeneration of the mucous membrane take place. Together with the lessening in size of the uterus by retraction, there is an increase in the development of intraglandular tissue and a reconstruction of the mucosa from the epithelium springing from the remaining glands. The exudation which accompanies this process, together with the migration of white corpuscles and the secretion from the cervical canal, constitute the lochial discharge. As to the local changes occurring in the course of infection, we have these normal processes modified as follows: First, as a predisposing cause of infection we have the absence of uterine contraction. As a result, the hemorrhage from the sinuses is controlled, not by pressure, but by thrombosis; secondly, the uterus contains, also incident to the absence of contraction, remnants of decidua, or placental débris, these, together with the thrombi projecting from the placental site, act as foreign bodies, and are prone to putrefactive changes; thirdly, the reconstruction of the mucous membrane is replaced by necrosis of the epithelium and basement membrane; fourthly, the normal constituents of the lochial discharge are replaced by the putrefactive débris of disorganized thrombi, the remnants of decidua and necrotic mucous membrane, mixed with the various micro-organisms which accompany these putrefactive changes. In order to appreciate the relation of such changes to the development of infection, it will be necessary at this point to study the histology of puerperal endometritis.

According to Bumm we have commonly to deal with the following forms:

Putrid Endometritis.—In this form putrefaction occurs from the presence of saprophytic organisms. The bacteriology of this condition is still undeveloped; as to the histology, we find that the necrotic decidua is cut off by a zone of cellular infiltration, by which the various micro-organisms present are prevented from penetrating into the underlying tissues. Invasion of the thrombi, however, at the placental site, is not prevented by any such zone of reaction on account of the want of organization of the thrombotic tissue.

Septic Endometritis, occurring in two forms.—First, a localized septic process in which a granulation zone occurs (contrary to what is found in the form mentioned above), shutting off the necrotic endometrium and preventing the invasion of germs. The uterine lymphatics are not actively involved. The placental site, as in the putrid form, is most markedly affected. Secondly, a septic endometritis, accompanied by a general infection. Bumm has studied five cases belonging to this class, and has found in three instances that infection has occurred by invasion through the lymphatic system, and in two instances along the course of the veins. In the first set of cases, the placental site is free from micro-organisms and thrombi, so that it is not likely that this pathological condition bears upon that form of infection resulting from hemorrhage in which thrombi, especially at the placental site, occur. In the second set of cases, the smaller lymphatic branches surrounding the sinues are marked by colonies of cocci, which extend into larger lymphatics underlying the peritoneal covering of the uterus. The decidua is disorganized and infiltrated with a fibrinous exudate, presenting a diphtheritic appearance. In this class of cases, as well as in that about to be described, the granulation zone is absent. This fact has evidently an important bearing upon the function of such a zone of demarkation, in combating the progress of micro-organisms into the underlying tissue.

Thirdly, *a thrombotic form of infection*; and this is the form which concerns us principally in the discussion of post-hemorrhagic infection. This is characterized by both a putrid and septic endometritis. It is described by Bumm as follows:

"The decidual layer of the uterine cavity, in a state of necrosis, is beset with micro-organisms. In the neighborhood of the colonies of streptococci, outlined by the staining process, are scattered innumerable colonies of putrefactive germs. The histological relations of the tissues—that is the decidual, glandular, and muscular tissues in the necrotic area—is unrecognizable."

The zone of reaction is marked. The placental site presents no remains of the placenta, but is marked by the projection of thrombi. The latter are found to be infected by various pathogenic germs, are disorganized, and offer, by reason of their disorganization, a direct means of entrance for the septic products into the current of the blood. The disorganization occurs first in the axis of the thrombi. The endothelium and the vessel wall become rapidly affected and break down into a mass of necrotic tissue mixed with white corpuscles and infected with cocci and bacilli.

In conclusion, we may summarize the development of infection as a result of thrombosis by noting the following events: First, a predisposition to infection arising in cases of hemorrhage the result of atony of the placental site; secondly, the formation of thrombi which offer, on account of their want of vital organization, an improper means of resistance to infecting germs; and thirdly, the presence of infecting material either from the pre-existing endometritis or from contamination at the time of delivery by careless or frequent examinations. When these factors are present we have a resulting infection occurring in accordance with the histological changes described above.

Clinically we are apt to consider pyæmia as the type of infection occurring as a result of thrombosis. Such a view is based upon, first, the frequency of the occurrence of phlegmasia following phlebitis, either by extension from the veins of the broad ligament or by the lodgment of coagula washed from the placental site and carried into the hypogastric veins and obstructing the flow of blood through the crural veins; and, secondly, upon the occurrence of embolism from the detachment of thrombi from the placental site or the parametrium. But it is more likely, from the histology of endometritis in the puerperal state, that the thrombi act more as a channel by which pathogenic germs find entrance into the organism than as a direct means of conveyance by their detachment and circulation in the blood-current. We have observed in the thrombotic form of endometritis that the disorganization of the thrombi is a pathological change dependent upon the action of bacteria, and that the natural barrier to the entrance of infecting elements is removed by this process of disorganization. According to this, the blood-current is likely to be contaminated, not by the remnants of uterine coagula, but by the presence of pathogenic bacteria and their chemical products. These, carried along in the blood-current, may be reasonably supposed to set up inflammatory changes, causing phlebitis, and especially to produce the development of a general septicæmia. There is no doubt that the formation of emboli is a common result of the detachment of thrombi from the placental site, but, in the study of the subject from a histological point, we are not warranted in accepting the occurrence of pyæmia as the universal clinical associate of thrombotic infection the result of hemorrhage, and, on the other hand, we are warranted in assuming the possibility of a marked state of septic endometritis occurring after hemorrhage without the early association of pyæmic symptoms.

REFERENCES:

(1) Winckel: Lehrbuch der Geburtshülfe, 1889.

(2) Doederlein: Centr. f. Gynæk., 1888, Nos. 23 and 28.

(3) Bumm: Archiv f. Gyn., Bd. xxiii, p. 237.

(4) Pozzi: Medical and Surgical Gynecology, translated by Brooke Wells, M.D., 1891.

THE TREATMENT OF LARGE OVARIAN CYSTS, WITH THE REPORT OF A CASE; EXTIRPATION OF THE COCCYX FOR CONGENITAL CYST.*

EDWARD P. DAVIS, M. D., PHILADELPHIA.

It is my purpose to night to report the clinical histories of these cases, inviting discussion upon them by the members of the society.

CASE I, of large ovarian cyst, occurred in the person of Mrs. V——, aged 55 years, seen by me in consultation for an abdominal enlargement. The history of the case was briefly as follows: The patient had been of extraordinary muscular development; by occupation a market-woman, she had enjoyed exceptionally robust health. At a time not accurately described by herself and family, she first noticed an enlargement of the abdomen; this must have been three or four years before I saw her. This enlargement was painless, slowly increasing, and had been variously diagnosticated as dropsy and tumor. The diagnosis of ovarian cyst had not been stated to the patient, although it may have been made by some of the numerous physicians who saw her.

When I first visited her she was undergoing treatment for the relief of dropsy, this treatment consisting in the administration of a diuretic mixture and the occasional employment of purgative medicines. On examination, the patient was markedly emaciated above the sternum; her thighs were moderately swollen, her legs less so than her thighs; her arms were wasted. Her expression was not markedly cachectic, and a typical ovarian face was not clearly developed. Her pulse varied from 100 to 110; her respiration was not noticeably difficult; she was cheerful, complaining of no pain, but of the increasing load and drain upon her muscular strength, occasioned by the abdominal enlargement. She was unable to lie down, resting in a partly reclining posture, usually on the right side. She could not sit upright, as the abdominal enlargement had descended so far as to protrude between her thighs. She was taking a fair amount of nutriment, and complained of no pain. She strongly desired to know the nature of her disease, and, if possible, to have the size of the abdominal enlargement decreased, or the condition radically remedied.

A superficial examination of the abdomen by palpation, and a partial vaginal examination, convinced me that a positive diagnosis could not be readily made under the circumstances in which I found the patient. She was accordingly told that it would be unjustifiable to even puncture her abdomen in her own house, and that a proper diagnosis and treatment of her condition could only be obtained in a hospital, where antiseptic precautions were possible. She was accordingly brought to the Polyclinic Hospital some time afterward, it being necessary to place her in a partially recumbent position, in a wagon, to transport her to the hospital.

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She was there examined by my colleagues, Dr. Baer and Dr. Morton, and by my friend, Dr. George E. Shoemaker. The following condition of the abdomen was observed:

Its enlargement was very great, and is best shown by the photographs done by Dr. White, of the resident staff, which I show to the Society. The skin of the abdomen was brawny and thickened, and at the first sight simulated closely some of the hypertrophies of the integument occasionally seen; indistinct fluctuation was obtainable upon the left side of the abdomen, while at the right and upper portion a sensation of greater resistance was detected. Vaginal examination was negative, as the tumor descended so far externally that it was very difficult to make a satisfactory investigation. It was learned from the patient's daughter that she had had, in the preceding few months, several attacks of syncope, which had occasioned considerable anxiety among the family. A diagnosis was made of probable ovarian cyst, and an exploratory incision, and, if practicable, the removal of the tumor, were advised. The patient's family were informed that her death in a short time was unavoidable if she was not relieved; that the chance of saving her life was questionable, and that the only relief lay in surgical interference, probably of a radical nature. It was observed that the patient retained remarkable muscular power, being able to partially raise herself and move about upon her bed in a manner indicating her former strength of physique and constitution. She and her family consented to the operation, and after suitable preparation, with the assistance of Dr. Shoemaker, Dr. Morton and Dr. Baer, the abdomen was opened.

To place the patient in position for operation it was necessary to provide an additional table for the tumor. As she could not lie upon her back she was turned upon her right side, the tumor lying pon a small table. As syncope was eared, oxygen was at hand, and an electric attery and various stimulants. It was etermined to mitigate the tremendous ange in the physical conditions of the rculation, which the emptying of the mor would produce, by removing the ntents as slowly as possible, making conuous pressure during this time. An inion through the abdominal wall revealed, as was expected, the sac of a cystic tumor. This was punctured by a trocar, when a large amount of chocolate-colored fluid escaped. More than a half hour was consumed in emptying the fluid, the patient meanwhile enduring the operation fairly well. The cyst was but very slightly adherent to the wall of the abdomen, and it seemed quite possible to completely remove the tumor; accordingly, the tumor was separated from the abdominal wall. It was found to be a multilocular cyst, its largest portion lying beneath the liver. The solid parts were broken down as rapidly as possible, and the entire mass removed. Its pedicle was from the right ovary, and was so small as to scarcely require ligation. No adhesions calling for ligature were found, and the hemorrhage which accompanied the separation of the cyst was inconsiderable.

The patient partially collapsed during the removal of the solid portion, but was relieved by inhalations of oxygen and the use of an electric battery, accompanied by the injection of stimulants. The removal of the tumor demonstrated the great changes which its enormous size had caused in the body of the patient; the lower ribs had been turned outward and upward, and the distended abdominal walls lay in folds against the spinal column.

As quickly as possible the abdominal cavity was freely flushed with a hot saline solution, the incision closed and large masses of cotton were bandaged firmly above an antiseptic dressing. The patient reacted from the operation, her temperature being 97.5° and then 98°; her pulse 120 and 130. She became conscious and complained of no pain. Six hours later, without appreciable warning, she died in sudden syncope.

No post-mortem examination could be obtained, but symptoms of hemorrhage were never present. The condition of the patient's kidneys and bowels was normal before and after the operation.

The solid portion of the tumor weighed nine pounds; seventeen gallons of fluid were collected during the operation, the weight of the fluid being 17½ ounces to the pint. The total weight of the solid and liquid portions of the tumor reached the great total of 160 pounds. Microscopic examination of the fluid showed cholesterin and hæmatin, blood cells and anomalous epithelia. No measurements were made of the tumor before its removal, as the patient's condition was such that I limited manipulation and disturbance of her position to the interference necessary in securing an examination for diagnosis.

The question of practical interest suggested by this case lies in the avoidance of the syncope which destroyed the patient's life. Is it possible to remove so large a mass from the abdominal cavity without producing such a change in circulation as to cause fatal syncope? Two methods of treatment were available one the partial emptying of the cyst, stitching its wall to the abdominal wall and using drainage; the second was the complete removal of the cyst as practiced. Had firm adhesions been present, no effort would have been made to remove the tumor; it would have been partially emptied, with the hope of prolonging the patient's life by the operation. The fact that the tumor could be separated without great difficulty from the abdominal wall led us to practice total removal, believing that the patient's chance of ultimate recovery would be sufficient to warrant the procedure. We were led to operate upon the case by the patient's desire for relief, by the threatening syncope from which she had already suffered, and by her remarkable and persistent strength, and her previous history of uniformly good health.

Case II is an example of abscess over the coccyx without appreciable cause, and accompanied by pain at the sacro-coccygeal joint, completely relieved, first by evacuation of the abscess, and then by extirpation of the coccyx. The patient, Mrs. B., was first seen in the eighth month of her first pregnancy; her health had been good; her pelvis was normal; the fœtus occupying the second position, its heart-sounds were plainly discernible. She complained of a painful swelling to the left of the coccyx and above the junction of coccyx and sacrum. This swelling gave indistinct fluctuations, and was painful upon pressure. On vaginal examination, pressure upon the coccyx revealed great tenderness, also to the left of the articulation with the sacrum. She stated that, three months previously, a similar swelling had appeared, which was dissipated without treatment. She said that, before her marriage she had been fond of riding, but at times had been obliged to dismount by reason of pain in this region. When asked if she could recall a bruise, fall, blow, or direct injury to the part, she could not do so. Under antiseptic precautions the tumor was incised, emptied of an ounce of foul, sanious pus, and a careful examination with the finger and probe was made to detect caries of the bone. This was apparently absent, a smooth cavity only being found. A pyogenic membrane was curetted away, the cavity irrigated and packed with gauze. Uninterrupted recovery followed.

At the patient's labor she experienced marked pain when the head reached the pelvic floor. Her child, a female, was small, and the delivery was readily accomplished under anæsthesia by chloroform. Her puerperal period was marked by no complications.

Five months after her labor she requested further relief for pain in the coccyx. Previous to her marriage she had been a trained nurse, understood the details of surgical operations, and desired to avoid any such procedure if possible. I could detect no hysterical element in the case, but the patient and her husband were convinced that treatment was requisite.

On vaginal examination the gential tract was found in a normal condition; the patient's general health was excellent; the position of the uterus was normal, but pressure upon the cervix gave rise to an indistinct, grating sensation and to the complaint of acute pain upon the part of the patient. The coccyx was accordingly removed, and found to be of normal length and dimension. The articulation between the sacrum and coccyx was slightly roughened, but no evidence of caries, necrosis, or suppuration could be found. The scar of the previous abscess was firm, and the abscess had been completely obliterated. The patient was entirely relieved by the removal of the coccyx, and continues in good health.

The interesting point in regard to the case is an explanation of the occurence of this abscess when the history of no spetic infection could be obtained. The usual causes of abscess in this region are violence, sinus, or fistula connecting with the intestine, and septic infection of the genital tract, septic infection after labor, accompanied by mechanical injury to the parts; by the fœtus, or the instruments used by the obstetrician. The most rational explanation of this case is afforded by the interesting examples found in surgical literature, where abscess cavities without communication with surrounding parts have been observed in this region of the body, as the result of a persistence of the fœtal medullary canal. Most of these cases occur in males, and hair is found in these cavities. The continued irritation of the parts by pressure has explained a non-septic necrosis which results in the formation of abscess in this region. In many of these cases an external opening is found near the coccyx, admitting a small probe from which a sinus proceeds along the walls of the intestine. Pavement epithelium is often found upon the walls of these cysts when hair is not present. Cases similar to that reported have been reported by Terrillon, Goodsall, Warren and Beach. An interesting research upon this subject is that by Mallory, of the Harvard Medical School, published in the *American Journal of the Medical Sciences* for March, 1892, page 263. The relation of such sinuses and cysts to the coccyx is well shown by Mallory in reproductions of microscopic sections through embryos of various ages.

CLINICAL OBSERVATIONS IN PHILADELPHIA.

W. H. LINK, M. D., Petersburg, Ind.

Having lately passed some three months in Philadelphia, studying the materials, methods and results that obtain among the great surgeons of this city, I shall try, through the medium of the Reporter, to set forth the advantages and disadvantages of Philadelphia as a place for post-graduate study for those men of the West and South who every year migrate toward the great medical centers of the country seeking the latest and the best in both medicine and surgery.

In the first place Philadelphia is cheap. Both board and lodging are exceedingly low. One can find good accommodations ranging from $4.50 to $6.00 per week. Instruction is given at moderate prices. To a man of wealth these things would be of no special importance; but the average country doctor is not noted for the large and increasing size of his bank account, and the meanest thing about him is his income. The length of his stay will thus depend largely upon the cost of living.

Philadelphia offers superior advantages for the study of abdominal surgery. In this branch she excels. There is not a man in her confines doing abdominal surgery as a specialty who is not a superior operator and teacher. The abdominal surgeons, too, take great delight in showing their work. Every facility for close and accurate observation is offered visiting physicians. The amount of material is apparently inexhaustible. If one will arrange his engagements properly, he may see from three to ten sections a day. In a twelve-weeks' course he can see the whole field of abdominal surgery covered—tumors, pus cases, hysterectomies, liver surgery, gut work, hernias, anything and everything to which pelvic and abdominal surgery comes for relief or cure.

If one stays in Philadelphia three months and takes advantage of his opportunities, and then goes home and fails to do good abdominal work, it will be due to defects inherent in himself rather than to a want of good and sufficient teaching.

The general surgery of Philadelphia, taken as a whole, is not so good as that of the gynecologists, and a great many of the general surgeons manifest but little desire to have their work observed. There are, of course, brilliant exceptions to this rule, which I will notice further on.

The Polyclinic has two admirable surgeons on its staff, who do a large amount of work, and as the classes are usually small at any one time, attending physicians have abundant opportunity to study each case and every operation at close range and master both the principles and diagnosis and the technique of the operation.

Dr. B. F. Baer holds a clinic three days in the week at the Polyclinic Hospital, and always has something of interest to show the class. Baer's methods of teaching cannot be improved upon. The class, small in number, are each permitted to examine the patient, make a diagnosis and prescribe the treatment. He then discusses the case with them and corrects any errors that have been made. If an operation is indicated, the class get a close view of the work and are thus permitted to study the case both from below and above. The old speculum system of teaching, or the Ferguson peep-show, has no place with Baer. As an operator, Baer holds an enviable position. His results are very good, and he throws open the wards of the hospital and invites inspection of his cases in their convalescence. Baer has some ideas of his own, which place him in a solitary position among the abdominal surgeons of Philadelphia.

He opposes drainage, as a rule, and he undoubtedly practices what he preaches. He very rarely drains. I saw him remove huge pus tubes and ovarian absceses during which the pelvic cavity was bathed in great quantities of pus. He irrigated carefully and closed without drainage. The patient made a prompt and painless recovery. He also gives morphia if his section cases suffer pain. He does a supravaginal hysterectomy, which is a most beautiful operation to look at. The operation consists in tying off the ovarian and uterine arteries, cutting the uterus away at the crevix and covering the retracted stump with the peritoneum by means of a few Lembert sutures. The only question about the operation is its mortality. He has twenty-seven cases with two deaths. If he can keep his mortality this low it will compare favorably with the operation by the nœud and give a quicker convalesence.

What one sees in Baer to approve, are his self-reliance, his courage, his thoroughness, his practical methods of teaching and his splendid results. To appreciate him at his worth, one should see him operate often. At first, he seems to be indecisive, hesitating, but as you see more of him, you find that what appeared to be nervousness and vacillation is only a species of somnambulism in which he merely thinks aloud and goes on with the work while talking to himself. His underlying strength and skill soon rise to the surface and when the work is complete you behold in the finished product a conquest that bespeaks a master. There are some minor things in Baer's technique that one might criticise, but, in the face of such splendid results as he shows, criticism seems akin to carping, so I refrain.

Dr. J. M. Baldy operates at both the Polyclinic and Gynecean Hospitals. His work is to be commended for his faultless technique as to asepsis and his boldness as an operator. He is very cool and collected and does not lose his head however trying the complication that may arise. Baldy is especially free from hobbies. He does good plastic work and I think shows good sense in doing Emmet's operation on the perineum without attempting to spoil a most beautiful and perfect piece of surgery by some modification of his own. We have yet to see anyone modify Emmet's works who did not convince us that the modification greatly marred the beauty and efficiency of the work. Baldy is one of the most fluent talkers at the Obstetrical Society and as a writer and teacher he makes himself easily understood. As to his results I cannot speak, as I saw none of his cases after operation, but presume that they are good, for his surgery was both clean and skillful. Both Baer and Baldy are warm admirers of the Trendelenburg position. They use it in most of their work and certainly the position, in their hands, appears to great advantage. In deep hemorrhage especially, it seems to supply a long felt want.

Dr. Joseph Price has a daily clinic in the diseases of women at the Philadelphia Dispensary. He does most of his surgical work at his private hospital, 241 N. 18th St. In this hospital he has about 90 beds and when crowded can make room for one hundred beds. Besides his work here, he does a great deal of consultation work both in and out of the city.

Large numbers of men come to observe Price's work. They represent every state in the Union and every one of the Canadian provinces. A great many stay and observe for a short time, whilst others take a course with Dr. Price of from six to twelve weeks. For this he charges from one to two hundred dollars. In this course the student-doctor makes a diagnosis and prescribes treatment at the dispensary. If the case is surgical, he assists Dr. Price to operate. All the operations are most carefully and thoroughly demonstrated. During the twelve weeks that I was with him, he did from two to five sections a day, and frequently as many as three plastic operations in one day.

He is a great operator, and, what is better, a great teacher. His technique is the simplest and most perfect it has ever been my good fortune to observe. His diagnostic skill is a marvel to those who have a chance to see it exercised. He operates for positive disease only, and not for any troubles that cannot be identified and located by the tactus. In all the numerous sections observed by me in his practice, I never yet saw him open the belly for anything but the most positive and easily demonstrated disease. His skill as an operator is so great that the work he does seems to the bystander easy till he tries it himself. He never, at any time or under any circumstances, loses his head or becomes in the least rattled. If a trying hemorrhage unexpectedly occurs, the only evidence of its effect on him is an increase of moisture on his brow. He uses but few instruments and the leading characteristics of his work are simplicity and the most absolute cleanliness. So perfect is the drill that he has put himself through, that when from any cause his hands are soiled, they appear like a fish on dry land and seem uncomfortable and instinctively move toward the water. He operates as a skillful musician plays the violin, his fingers always find the proper position at the right time, but it has been done so often that the action has almost become automatic and scarcely requires an effort of the mind and will. His sections now number over two thousand, while his mortality is near three per cent.

He has done 85 extra-uterine pregnancies with one death, and his mortality in hysterectomies is 5 per cent. While I was with him he had but three deaths at his hospital, and saw the patients daily, after section, until they left for home. Dr. Mordecai Price, the brother of Joe, is also a great surgeon, whether judged by his knowledge, operative skill or successful results. He is now doing almost as much work as his brother, and is doing it just as well. Both of these men do a large amount of plastic gynecology, and while their abdominal work is almost beyond criticism, their plastic surgery is simply a beautiful exhibition of the surgeon's art. They both do Emmet's operation on the perineum and believe it the best operation of the kind ever developed or perfected for the purpose. They give Emmet full credit for his work, and do not attempt to rob him of his just dues by a useless or harmful modification of their own. The fact is, Emmet has done for plastic gynecology in America just what Tait has done for abdominal surgery in England, and it would be much better for suffering women if those who offer them surgical relief would take the work as Emmet has perfected it and not mar a really beautiful procedure by some fancied improvement of their own. The work of the Prices is daily increasing and they are now doing over 600 sections a year. This may seem a large amount of work, but when we remember that they draw their material from British America to Cuba and from California to Massachussetts, that patients come to them from every State in the Union, it will not seem so large. They have no idle moments and know no Sunday.

The general surgery of Philadelphia is no discredit to her old-time reputation. But since the days of Agnew, Pancoast and Gross some changes have crept in. Then the best and most brilliant work was done by the old men. In fact, Agnew's success all came to him after 45. Now with probably two exceptions, Morton and Keen, the really valuable, original, brilliant and successful work is done by the younger men. Roberts, Deaver and White are all worthy to wear the mantle of any of Philadelphia's great surgical teachers of the past.

Dr. J. William White is professor of surgery in the University. He is a natural teacher and no one is readier to recognize it than the students who sit under his tutelary wing. He is a clear, fluent and instructive lecturer. His operative skill impresses all visiting physicians so favorably that they desire to see all of it possible. Dr. White is a great stickler for antisepsis; but his antisepsis is not an excuse for slovenly technique, for it is joined to the most perfect asepsis.

Being a personal friend and a great admirer of Sir Joseph Lister and Mr. Fredrick Treves, he believes strongly in the virtue of germicides but does not neglect cleanliness. The fact is, White's aseptic precautions, and the automatic exactitude with which he applies and observes them in his work, would ensure success in the most difficult abdominal surgery. In Dr. White are most happily combined the brain of a cultured surgeon and scholar with the body of an athlete, and to the *mens sana in corpore sano* is added in the freest manner the polished manners of a gentleman. His kindness and courtesy to visiting surgeons are tireless, while nothing exhausts his patience.

Should one desire to work a short time in a good clinic and under an able specialist and teacher in diseases of the nose and throat, he will find all that he may wish at the Pennsylvania Dispensary, cor. 13th and Chestnut Streets. The nose and throat department of this dispensary is in charge of Dr. J. L. Hammond. He is one of the rapidly rising young men of the city. He has marked diagnostic skill, and as a manipulator of instruments and a teacher of others he certainly has few superiors. Dr. H. while working at this specialty wisely devotes himself to general practice, and this broadens and deepens his knowledge against the day when his practice will be so large that he will be compelled to confine himself to a special line of work.

There are hospitals and dispensaries and schools enough in Philadelphia to keep any number of post-graduate attendants busy from morning till night if they were systemetized so that hours and days would not conflict. But so long as only a few men exhibit a desire to show their work, a very large amount of valuable material must of necessity go to waste.

ABDOMINAL HYSTERECTOMY WITHOUT A PEDICLE, WITH REPORT OF TEN CONSECUTIVE CASES*

RUFUS B. HALL,† M. D., CINCINNATI, OHIO.

The best methods of treating the pedicle in abdominal hysterectomy has been a subject for contention for years. There have been two principal methods which have been universally accepted—the intra-peritoneal and the extra-peritoneal, and for a number of years one or the other of these has been recognized as the orthodox plan.

As we might naturally expect, there have been many modifications and improvements in minor technique of Schröder's and Pean's methods, as originally practiced by them. As our knowledge of the pathological conditions and complications to be overcome in removing fibroid tumors increased, and our operative experience became broader and more mature, the Pean method of extra-peritoneal fixation of the pedicle became the one which was almost universally employed. For this reason it will be the method most frequently used in making comparison in this paper. The cause of the extra-peritoneal method being the one most frequently employed is obvious when we recall the fact that only a small percentage of all fibroid tumors are suitable cases for treatment by Schröder's method, by those advocating it, and of these it was not possible to control hemorrhage in all cases; and, above all, the Pean method gave the best results.

Those of us who have made many abdominal hysterectomies for the removal of large tumors know that the tumor may, and not infrequently does, descend into one of the broad ligamants and body of the uterus so far that we must separate it from its peritoneal envelope before a suitable pedicle can be made and fixed outside. Manifestly, these complicated cases are not suitable ones for the intra-peritoneal method, even by the most ardent advocates of it, and have, therefore, heretofore been treated by the extra-peritoneal method by most operators. We are all aware of the fact that, if we use the intra-peritoneal method, we are in great danger of losing our patient from intra-abdominal hemorrhage; and, if we use the extra-peritoneal method, we not infrequently see the pedicle slough and become a menace to the life of the patient for days afterwards, and not a few die from septic infection from that cause. If the patient makes a primary recovery from the extra-peritoneal method she is not in all cases restored to health. She not infrequently suffers great pain, due to the pedicle dragging upon the abdominal scar and pressure upon the distorted pelvic organs interfering with their functions because of the fixation of the pedicle. The prolonged and painful convalescence which necessarily follows this method is a very serious objection to it, and not infrequently a hernia follows the operation, at or near the point where the pedicle was fixed in the abdominal wound.

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* Read by title at the American Medical Association, 1893.

† Professor of Clinical Gynecology, Miami Medical College.

If we can remove these objections without additional risks to our patients, it is our duty to do so. Thanks to the ingenuity and skill of American gynecology, we have now a method which promises all of the advantages of both of the old methods, with but few of their disadvantages.

It was one of these desperate cases, in which the operator had to "enucleate large nodular masses from the broad ligament," that induced Eastman to remove the entire cervix in his first total extirpation operation. The success in that case encouraged him and others to continue making the operation, improving the technique in minor details until it is very near, if not quite perfect. The procedure has distinct merit over all other methods, and it is upon this basis we ask a hearing before the profession at this time.

First: There is no pedicle to become necrotic, and thereby a source of septic infection, or fatal hemorrhage.

Second: There is no more danger from hemorrhage than after ovariotomy.

Third: There is no more raw surface left in the peritoneal cavity to favor intestinal and omental attachments than after ovariotomy.

Fourth: It is no more difficult than many other abdominal and pelvic operations, and does not require any more time to perform it.

In patients with thick abdominal walls this method promises as good results as in those with thin abdominal walls, which cannot be said of the extra-peritoneal method. There is no distortion of the pelvic organs, thus interfering with their functions. There is a comparatively painless convalescence, which is shortened at least two weeks under that of the extra-peritoneal method.

These are a few of the advantages of the method as suggested to me in my experience with it.

There is not as much danger of hemorrhage as there is in simple ovariotomy, from the fact that in the latter operation the pedicle is transfixed and ligated in mass; and in not a few cases the pedicle is short and thick, with great tension upon it, favoring the slipping of the ligature and hemorrhage. In total extirpation the broad ligaments are divided from the uterus and ligated in sections which are not put upon the stretch, therefore there is but little if any danger of a ligature slipping off. The ligatures do not include any uterine tissue, therefore the tissue within their grasp is not susceptible to undue shrinkage and resulting hemorrhage. There is no raw surface left in the pelvic cavity after the operation is completed, except the ovarian stumps, to form attachments to intestine or omentum.

After ligating off the ovaries upon both sides, the peritoneum only is divided about one inch above the top of the bladder, across the front of the tumor and at a corresponding heighth on the back of it. This is done before any temporary clamp is placed. The peritoneum is then stripped down in front and the bladder separated from the tumor down to the vagina, and the peritoneum stripped from the tumor behind. All of the ligatures required in the subsequent steps of the operation are placed so as not to include the peritoneum in their grasp. The number of ligatures in any of my operations has not exceeded three upon each side after the peritoneum was stripped down. One end of each ligature securing the uterine arteries is left about six inches long, and after the cervix has been removed, is carried out through the vagina, and are cast off or removed through that passage. The peritoneal edges which were stripped from the tumor are now turned in towards the vagina and neatly coapted from one ovarian stump to the other by a running stitch, thus closing off entirely the raw surface in the vagina from the peritoneal cavity. The wound in the vagina is treated the same as after an ordinary vaginal hysterectomy.

The difficulties attending the operation are not so great as one who has not attempted it would suppose, and they are easily and rapidly overcome by one skilled in performing difficult and complicated abdominal and pelvic operations; and the time required to perform the operation is no longer than that required to make many of the difficult abdominal and pelvic operations now being performed daily.

It has been said that by the removal of the cervix the key of the arch of the pelvis is destroyed, and a weak point is the result, which will in a certain percentage of cases result in vaginal prolapses or hernia. Such an accident has not followed the operation, to my knowledge, neither has it occurred after vaginal hysterectomy; and I do not believe it would occur any more frequently after abdominal hysterectomy than vaginal hysterectomy, where the two conditions after operation are identically the same; and we do not hear of objections to the latter operation on that account.

The method has stood the test admirably fulfilling every indication and requirement even better than its friends had anticipated. I am convinced that the method has come to stay, and in the near future the clamp in abdominal hysterectomy will as certainly be a thing of the past, as it now is in ovariotomy.

I make this assertion advisedly, knowing full well that it is a radical one which is not likely to be readily assented to by many operators. In proof of my confidence in the method, I here give a short report of all the cases I have operated upon by this method, ten in number.

Many of the cases were very undesirable subjects for any operation, and most of them proved to be complicated operations as you will see, thus testing thoroughly the merits of the method.

Case 1. Mrs. W., aet 50. Referred to me by Dr. Joseph Eichberg of this city. Operated upon February 4, 1892, and a tumor weighing 22 pounds removed. There were firm and extensive adhesions to to intestines and omentum and abdominal walls, as well as in the pelvis. There was an abscess in the pelvic cavity holding a pint or more of pus. This abscess was ruptured and its contents spilled inside of the peritoneal cavity during the operation. Patient recovered and is now in excellent health.

Case II. Mrs. P., aet 52. Referred to me by Dr. Means, of Troy, Ohio. Operated upon March 31, 1892. The tumor extended to one inch above the umbilicus. She made a rapid recovery and is now in good health.

Case III. Mrs. F., aet 37. Referred to me by Dr. Templeton, Covington, Ohio. Operated upon September 11, 1892. At that time patient had been suffering from septic peritonitis for 12 days, caused by the strangulation of a pedunculated portion of the tumor the size of a small orange. At the time of the operation, pulse 138, temperature, 103°. There was a pint or more of dark colored fluid in the peritoneal cavity. The tumor was a large one, extending up to the ribs. The patient made a prompt recovery and is now in good health.

Case IV. Miss H., aet 42. Referred to me by Dr. J. G. Senour, of Troy, Ohio. The physician of a neighboring city removed the ovaries and tubes June 3, 1892. This operation failed to check the growth of the tumor or the hemorrhage. A few months after the operation the hemorrhage was worse than before. The tumor filled the entire pelvic cavity and projected well up into the abdomen. The operation was made December 2, 1892. The bladder was carried up almost to the top of the tumor and had to be dissected from it. There were extensive and firm intestinal adhesions to the left side of the tumor, corresponding to the point where the ovary had been removed. In the right side of the abdominal and pelvic cavities there were many adherent coils of intestine which were separated with the utmost difficulty. One coil was adherent behind the tumor deep down in the pelvis to the stump from whence the right ovary had been removed, and had to be separated by the sense of feeling before the tumor could be delivered. The intestine was intensely lacerated in liberating it. The peritoneal covering of the intestine at the point of injury was entirely stripped from it, and the adhesions were so firm and extensive that it was impossible to trace out the intestine to a healthy portion so as to make a resection. The intestinal injury was repaired with sutures, but could not be brought up so as to make an artificial anus. The patient rallied well, and in three hours had a pulse of 70, and a temperature of 99°. But to my very great regret the fluid removed from the drainage tube had a feculent odor, showing conclusively that the intestines at least leaked gases. The patient died the 5th of December from septic peritonitis, due to intestinal leakage. The death was not due to any fault of the total extirpation method, and the result would have been the same by any method of treating the pedicle, as it was plainly due to intestinal leakage.

CASE V. Miss J., aet 39. Referred to me by Dr. Blair, Lebanon, Ohio. The tumor was a soft œdematous fibroid. Profuse hemorrhage. Operation March 9, 1893. Patient made a prompt and uninterrupted recovery.

CASE VI. Miss M., aet 40. Referred to me by Dr. Rhu, of Marion Ohio. Tumor extended well into the abdomen and was firmly adherent in the pelvis. Operation March 16, 1893, after an attack of acute peritonitis of fourteen days duration. Patient recovered.

CASE VII. Mrs. T., æt 44. Came to the clinic of the Miami Medical College for treatment. The tumor extended to three inches above the umbilicus. Pain and hemorrhage. Operation at the Presbyterian Hospital, March 30, 1893. Patient made a prompt and easy recovery.

CASE VIII. Miss S., æt 39. Referred to me by Dr. Blair, of Lebanon, Ohio. Large, soft, œdematous fibroid of sixteen year's standing. Tumor extended about four inches above the umbilicus. Profuse hemorrhage, great anæmia, and extreme weakness. Operation April 29. Prompt recovery.

CASE IX. Mrs. B., æt. 33. Referred to me by Dr. Heaty, of Glendale, Ohio. Profuse hemorrhage and severe pain. Operation May 15, 1893. Tumor size of cocoanut. Double pyosalpinx and suppurating ovaries with six ounces of pus on left side. Universal adhesions. Patient recovered.

CASE X. Mrs. N., æt. 52. Referred to me by Dr. Dewitt, this city. Profuse hemorrhage for three years. Tumor extended three inches above the umbilicus and was firmly fixed in the pelvis. Great pain and marked anæmia, and extreme weakness. Operation May 23, 1893. Extensive intestinal adhesions, large suppurating ovary holding eight ounces of pus, which was ruptured and its contents spilled inside of the cavity during the operation. Patient recovered.

I have heretofore been so prejudiced against the operation of hysterectomy that I have refused to operate as long as the patient's condition could be made tolerable. But with the present good results following total extirpation, I shall hereafter advise operation earlier for fibroids. Considering the nature of the cases constituting this report, the results are all, or even more, than could be expected.

The Weight of the Two Sides of the Brain.

Prof. Braune, of Leipzic, has recently published the results of weighing the halves of 100 human brains. These were divided in the median line, and the cerebellum, with the medulla and pons, were cut off and bisected. The weight of the two sides of the whole encephalon were compared, as well as that of the cerebral hemispheres, and the halves of the cerebellum with the medulla and pons. It has generally been taught that the left half of the brain is heavier than the right, and that this is a physical cause of right-handedness. The results of Prof. Braune's investigations do not seem to bear this out. He found the left side of the entire brain heavier in 52 cases, and the right in 47 cases, the two sides being equal in one case. And he also found that if the excess of weights of the two sides be added up, the right side showed a preponderance, the difference between the two sides being in most cases so slight as not to deserve any consideration. In five cases in which the right side considerably outweighed the left, the bodies were examined for signs of left-handedness, but none were found. The left cerebral hemisphere was the heavier in 54, the right in 37 cases; while the left side of the cerebellum was the heavier in 54 and the right in 33 cases. Thus he found that the cerebral hemisphere of one side is the larger about as often as the cerebellum of the other; but the larger halves are on the same side about twice as often as on different sides.—*Boston Medical and Surgical Journal.*

An exchange publishes the following bill-head of a doctor in Kansas: "A prompt settlement of this bill is requested. If bills are paid monthly a discount of ten per cent. is allowed. Bills not paid monthly will be passed to my attorney for collection. If you pay your doctor promptly, he will attend you promptly, night or day, rain or shine; while your slow neighbor suffers and waits, as he made the doctor wait, and while he is waiting the angels gather him in."

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SATURDAY, JULY 15TH, 1893.

EDITORIAL.

MEDICAL ASSOCIATIONS.

Men are gregarious. They work best by division of labor. Individuals differ in capability for achievement as in capacity for enjoyment. Methods and tastes are as varied as individuals are numerous. It is by aggregation that the common weal is best conserved, the weakness of one being supplemented by the strength of another and the benefits of superior strength or skill diffuse among the many. A general average is thus maintained which prevents the social organism becoming lop-sided or top-heavy. The resultant of many and diverse forces is constant and uniform in direction and accomplishes what would be impossible to the individual. Countless diversities massed into a homogeneous power, a force irresistable by presenting obstacles. Association, like a smelting furnace, reduces to shining metal the gross crude ore alike with delicately-wrought filagree works of art.

For mutual encouragement, for mutual help, for the greatest good to the greatest number, medical associations are organized. Their philosophy should be preeminently utilitarian and Jerremy Bentham should be canonized as patron saint.

The greatest good to the greatest number is the motto most worthy to be engraved upon their official seals.

Bacon says, "reading makes a full man, writing an exact man, and speaking a ready man." To read in order that one may observe intelligently, write accurately and speak readily and exactly is a most laudable ambition. But without personal association there is no audience to whom to address what has been written, and no intelligent ears to receive ideas when spoken. Discussion brushes away cloudy ideas, crystalizes nebulous hypotheses, sharpens the wit, gives command of a vocabulary, makes comprehension easy, and compels close study and advised speaking. One will carefully scan facts and their relations if they are to pass through the flame of criticism and will make knowledge his own before subjecting it to the keen scrutiny and ready and sharp criticism of assembled fellows who accept nothing as gold because of its glitter.

Ideas beget ideas, as steel strikes fire from flint. The very discussion of the subject insures its closer study; thus self-improvement carries with it an extension of benefit to all who appear within the charmed circle. The assembling of large bodies of men interested in the same subjects and pursuing similar lines of thought kindle enthusiasm, arouses ambition, stimulates investigation, and often fixes the attention on interesting parts of the work which had hitherto been overlooked in the eager pursuit of other parts. Personal association broadens the mind, elevates the thought, and developes love for the less sordid aspect of daily professional tasks. To the conscientious practitioner the annual society meeting takes him from the labor and anxieties of his round of toil, gives a much needed variation to his life, and affords rest and recreation. At the same time it brightens up his armor by the attrition of friendly minds one upon the another. He goes back to duty refreshed and replenished, and made stronger in every sense of that word.

Our object then in the organization of a medical society should be the pursuit of knowledge, the development of mind, the strengthening of purpose, the evolution of truth and the general elevation of the standards of professional honor and professional acquirements. In doing these things a certain mutual touch of mind and a communion of spirit beget broader views and inspire more enthusiastic investigation, the glamour of philanthopy may crown the dryest of facts, and the prophet's vision vie with the poet's dream in connecting the commonest acheivements of the present into the immeasurable blessings of the future.

So long as a medical society keeps before it only these ulterior objects, so long as it ignores politics and advertising, just so long is it a great boon to the rank and file of the profession. Let work, and work only, year by year, draw the members together and power for good will increase as time rolls by; but the very moment men forget these ends and begin to organize small cliques for office and advertisement, a great black mark is placed across the fairest escutcheon and men begin to spend time in laying pipe and working for votes and influence. Bitterness and strife and backbiting appear and the hard working and simple member to whom such things are disgusting drops out and looks elsewhere for the mental pabulum that he is disappointed in finding. Let the offices and all such emoluments be conferred upon the very old men who can fill a chair gracefully and fairly though they may no longer be desirous of taking part in the laborious work of writing papers and leading the discussions. The position of president or presiding officer is but an empty honor and ought to be the reward of long service if it is valued as a reward. Young men should be content to lead the battle against disease. If Nestor is present, let him preside, Achilles and Ulysses can fight and talk. Age in the chair commands and deserves respect, while on the floor age may not always be synonymous with wisdom.

Gonorrhœa.

A committee of the Therapeutical Society of Paris reported favorably on the use of the urethral bougie of M. Weber in incipient gonorrhœa. This bougie is prepared as follows:

℞

Gum arabic in powder	15 pts.
Lactose	5 pts.
Glycerine	1 pt.
Iodoform	2 to 4 pts.

M. Make ten bougies 13 cm. long.

Bougies thus prepared are soft and supple. They should be introduced at night, on retiring. They melt in the urethra, and are expelled without effort in urinating.—*Med. Review.*

REPORT OF THE COMMITTEE ON LEGISLATION.

[**Advance Sheets of the Transactions of the Medical Society of the State of Pennsylvania.**]

The Legislative Committee respectfully reports that it has at last been able to secure the passage of an efficient medical act by the Senate and House of Representatives of Pennsylvania.

By the provisions of this law, which still awaits the approval of the Governor, no one can enter upon the practice of medicine in this State after March 1, 1894, unless he or she has a competent common school education, has received a medical diploma, and has been granted a license to practice medicine and surgery by the Medical Council of Pennsylvania, after an examination by a State Board of Medical Examiners.

Applicants for license, who have received their medical degrees after July 1, 1894, are not eligible for examination and license unless they have attended three courses of medical lectures in three different years; and those who have received their medical degrees after July 1, 1895, are not admitted to examination for license unless they have studied medicine for a period of four years, three of which must have been in college.

The Committee believes that few, if any, States of the Union have laws which will protect the public from medical incompetence more efficiently than this enactment of the Pennsylvania Legislature; and it therefore congratulates the public and the profession on the successful outcome of the work undertaken nine years ago by this Society.

A short history of the efforts of the Society may here be of interest.

At the meeting held in Philadelphia May, 1884, various resolutions were offered by Dr. L. M. Gates, of Scranton, Dr. Edward Jackson, then of West Chester, now of Philadelphia, and Dr. John B. Roberts, of Philadelphia, having for their purpose a separation of the teaching of medical students from the examination and licensing of intending practitioners of medicine.

During the fall and winter of the same year, committees of the Philadelphia County Medical Society and of the Medical Jurisprudence Society of Philadelphia, in conjunction, formulated a bill establishing a State Board of Medical Examiners and Licensers, which was presented to the Legislature for enactment at the session of 1885. A copy of this bill was subsequently presented by Dr. Roberts, for the consideration of the Section on State Medicine of the American Medical Association, at the New Orleans meeting in the spring of 1885, and was referred by that section to the general meeting of the Association. The Association thereupon passed a resolution advocating the establishment in every state and territory of a State Board of Medical Examiners and Licensers, directed the Permanent Secretary to transmit a copy of the proposed law to each state society, and requested each state society to report upon the subject to the Association in 1886.

In consequence of this action of the American Medical Association, the Medical Society of the State of Pennsylvania had before it for discussion at the Scranton meeting in 1885, not only the report of its committee on the "Best Method of Granting the License to Practice Medicine," but also a completely drafted bill. Much attention was, therefore given to the subject, and a committee was authorized to prepare a bill for presentation to the Pennsylvania Legislature. At the Williamsport meeting in June, 1886, the committee reported a bill modeled to some extent on that proposed and advocated by the Medical Jurisprudence Society of Philadelphia, which had been sent to the Society by the American Medical Association as above detailed. The original bill had been introduced in the Legislature of 1885, as has been mentioned, but had failed to become a law.

Since this action successive committees of the Society have been earnestly engaged in organizing the profession, for the purpose of educating the public as to the necessity of medical legislation to protect the citizen from medical ignorance; and bills have been introduced at each session of the Legislature only to meet with successive defeat.

The present committee was authorized to have the bill, adopted by the Society at the Harrisburg meeting of last year, introduced in the Legislature convening January 1st of this year (1893). It accordingly had the bill introduced in the

House of Representatives by Hon. Henry K. Boyer, and in the Senate by Hon. Charles A. Porter. The committee, in addition, published and distributed a twenty-eight page pamphlet, showing the constitutionality of such legislation, the need of a law in this State, and the favorable view of the bill held by many representative physicians, who, from all sections of Pennsylvania, furnished the committee with written approvals. In this pamphlet were also published resolutions unqualifiedly endorsing the bill passed by the faculties of the Jefferson Medical College, the University of Pennsylvania, the Woman's Medical College of Pennsylvania, and the Philadelphia Polyclinic.

When the bill had been before the Legislature for two and a half months, it became evident to the committee that its earnest and unremitting efforts would be unavailing, and that the bill as then drafted could not be enacted into law. The passage of the bill as introduced was vehemently opposed by the sectarian physician of the State and by certain gentlemen belonging to medical schools and county medical societies in affiliation with this Society. Although your committee might have been able to have secured the passage of your bill against the wishes of one of these forces, it could not accomplish the work against such a combination of antagonistic agencies.

On March 19th, 1893, therefore, the committee held a conference meeting with prominent officers of the Society and representative members of the faculties of the University of Pennsylvania, Jefferson Medical College, the Woman's Medical College of Pennsylvania and the Philadelphia Polyclinic. As a result of this conference the committee decided that to modify the bill in such a manner as to secure the passage of a law, similar to that which has been so satisfactorily operative in the State of New York, was wiser than to permit the open and hidden enemies of higher medical education to rejoice at having once more defeated the Society's efforts to give Pennsylvania an effective medical law. It was also thought that if a medical bill was not passed at this session of the Legislature, it was probable that there would be little chance of any such legislation being effected for many years to come.

Accordingly the bill which passed both houses of the Legislature last week (May 10th) was substituted for the original bill, and successfully pushed to final passage. A copy of the law is appended to this report. Its provisions are briefly as follows:

From March 1st, 1894, the Medical Council of Pennsylvania shall have control of the examination and licensing of all physicians intending to enter upon practice in the State.

The Medical Council shall decide as to the competency of the preliminary education of intending practitioners and as to their moral character; and must require them to have a medical diploma confering the full right to practice all the branches of medicine and surgery. Diplomas granted to such applicants after July 1st, 1895, must have been obtained after four years medical study, three of which years must have been in college.

When these facts have been satisfactorily proved by affidavit, the applicant for license pays a fee of twenty-five dollars and is referred for examination to one of the three State Boards of Medical Examiners, which substantially act as committees under the supervision of the Medical Council.

The three State Boards of Medical Examiners are appointed by the Governor from the members respectively of the Medical Society of the State of Pennsylvania, the Homœopathic State Medical Society and the Eclectic State Medical Society; and consist each of seven members.

The applicant makes a choice of the Board by which he wishes to be examined; but the questions must be the same before the three Boards in all branches except materia medica, therapeutics and practice of medicine. The Medical Council, moreover, selects the questions for all examinations from lists of questions submitted to it by the three Boards of Examiners. The examinations must be in writing and the questions, answers and marks preserved for reference.

The Medical Council, having received notice that an applicant has passed a successful examination, issues its license, with the seal of the Commonwealth attached, to the candidate, if he be adjudged by the Council to be duly qualified to practice medicine and surgery.

The Council fixes the standard of qualifications, and has a veto on all rules and regulations adopted by the three Boards of Examiners. It may issue licenses without examination to physicians licensed by Medical Examining Boards or Boards of Health of other states.

The Medical Council consists of the President of the State Board of Health and Vital Statistics, representing the medical branch of the State Government, the Attorney General, representing the legal department of the Government, the Superintendent of Public Instruction, representing the Educational department, and the Lieutenant Governor and the Secretary of Internal Affairs, representing the Legislative and Executive departments, and finally the Presidents of the three State Boards of Medical Examiners.

The Committee, in closing this lengthy and perhaps tedious report, wishes to express its heartiest thanks to Hon. Henry K. Boyer and Hon. Charles A. Porter, who introduced the Society's bill in the House of Representatives and the Senate, respectively, and also to those physicians and other members in both Houses; who, by their counsel and advocacy of the bill, rendered incalculable aid. In this place it is also proper to express its great obligation to Hon. Frank M. Riter of the House of Representatives and Hon. John B. Showalter of the Senate; who two years ago so actively advocated the passage of the bill introduced by this Society.

When the bill had very nearly reached the point of final passage, it was found that the committee's expenses would exceed the appropriation made by the Society for its use. The members of the committee, however, concluded that they would bear the additional expenses personally, rather than permit the bill to fail, after the Soctety had so nearly reached the goal for which it had been striving for nine years. All bills paid by the Society have been scrutinized by the Secretary of the Committee, approved by its Chairman, and then sent to the Publication Committee by which orders have been drawn on the Treasurer as required by the laws of the Society. The expenses incurred by the Committee, in excess of the appropriation will be something less than one hundred and fifty dollars.

Since the work assigned to the Committee has now been practically completed, the Committee respectfully asks to be discharged.

All of which is respectfully submitted.

H. G. McCORMICK, *Chairman.*
W. MURRAY WEIDMAN,
J. W. MOORE,
I. C. GABLE,
C. L. STEVENS,
W. S. FOSTER,
JOHN B. ROBERTS, *Secretary.*

[The law to which the above report refers was published in the MEDICAL AND SURGICAL REPORTER, June 3, 1893.—EDITOR.]

CORRESPONDENCE.

"THE POINTS OF SIMILARITY"

TO THE EDITOR : Dr. Roberts' discussion of "The Points of Similarity between us and Homœopathic Physicians" in the issue of the REPORTER of May 27th, is interesting and suggestive. The obvious criticism might be offered—which casts no reflection on the author of the excellent paper—that whether the statements made are viewed as an apology for or an elucidation of the actual practice of Homœopathy, they might have come more appropriately from a member of the Homœopathic school. It would seem that the members of a medical sect which represents the objection of a small minority of the profession to the general principles of therapeutics followed by the majority, would, ipso facts, be placed on the defensive. Until the homœopathic school was organized, there was really no such thing as a *school* or sect of medicine in the present sense of the term. There were individual differences of opinion both as to theory and practice, there were national and local jealousies in the days when narrow-mindedness and bigotry pervaded all ranks of society, but whatever general organizations of physicians existed were based on a common interest in a common life work. Perphaps it is the natural sympathy for the " under dog " that occasions the popular sentiment of antagonism to anything that savors of hostility to the "new school." Even those of the laity who are not avowedly attached to Homœopathy wonder that physicians should expect from one another less of open rivalry and more of occurrence in opinions and methods than do those engaged in other professions and business. But for several reasons it is desirable that the medical profession should be united. The results of their work to the community at large are of transcendent importance, since health and life, instead of wealth and convenience are at stake. Financial errors may be rectified, imperfect handicraft corrected or restitution made, wrong legal opinions revised and decisions appealed, but, on the part of the physician and surgeon, a mistake, or a failure to adopt the best possible method is seldom without evil result and is usually irrevocable. Again, while a merchant can entrust almost everything, except the general supervision of his affairs, to subordinates whom he can hire for six to fifteen dollars a week and can feel satisfied if his business is carried on with financial honesty and success, the physician's money-making though important, is nevertheless, trivial in comparison with the labor of scientific study and careful practice. Every detail of his strictly professional duties must receive his personal attention and must be done accurately. He is continually confronted in his patients with problems which require a familiarity with chemistry, physiology, anatomy, psychology, bacteriology, microscopy, pathology, medical jurisprudence and other branches of study and a practical experience which no one man unaided can acquire. Physicians therefore, more than any other body of men are interdependent and grow to feel that every doctor who is not with them is against them.

The laity are inclined to draw comparisons between schools of medicine and religious sects. The analogy holds good to the extent that the homœopathic school was a splitting off of a small body from an originally undivided profession, ›ut there are the marked differences that n medicine there never has been fixed creeds except those adopted by dissenting sects, nor has the regular school been bound to any formalism other than the code of ethics, which is simply an application of the Golden Rule and general principles of honor to special cases, and to which, as Dr. Roberts observes, no serious objection is offered by Homœopaths. Moreover, a man's goodness or badness, religiously speaking, depends not so much on the correctness of his dogmas as upon his intentions, while medical practice is good or bad according to whether the ideas which it follows are right or wrong.

A closer comparison can be made to the legal profession, in which, at present, the term *school* (in the sense of sect) is utterly meaningless. If, however, at some future time a number of lawyers should organize into a sect opposing the common construction of law and the customary practice of the majority of the profession, their attitude would be analogous to that originally assumed by the disciples of Hahnemann, and it would be simply a question of numbers and influence whether they would be considered a coterie of visionaries or whether they would succeed in splitting up the legal profession into schools.

It is not now appropriate to enter into a discussion of the merits or demerits of Homœopathy. A great point will be gained if the laity can be taught to regard medical sectarianism as intrinsically evil, to be justified only by strong dissenting convictions. If they can be made to appreciate that it is something more than dollars and cents that actuates the demand of the regular profession for a concentration of medical effort and thought, we shall, at least, not be condemned for declining to extend the right hand of fellowship to sectarians. If the tenets of Homœopathy can be plainly presented to the laity, if Homœopathists can be driven from their attitude as martyrs to the cause of mild doses and medical renovation, and pinned down to a defense or renunciation of Hahnemann's teachings, then we can trust the common sense of our non-medical fellow citizens to choose wisely, in the main, between regular medicine on the one hand and sectarianism on the other.

Dr. Roberts has confirmed by abundant testimony the growing sentiment that the homœopathy of to-day has practically cut loose from the restrictions of Hahnemann, and that it is to a great extent parasitic upon the medical teaching and literature of the regular profession. Far from being creditable to homœopathy, these facts carry with them the odium which must always attach to any individual or society whose avowed principles and proctices are at variance. This is a period when religious denominations are revising their creeds and eliminating inconsistencies between nominal and actual beliefs. Let the homœopathic medical profession institute a general and formal inquiry as to what its tenets really are, and let it then proclaim them publicly in such plain terms as to obviate any future misunderstanding. My personal opinion is that such a general sifting of the homœopathic school would divide it into four parts. First, a few surviving believers in the original high-attenuation homœopathy would be found; secondly, there would be a larger percentage of honest adherents to a modified homœopathy, men whom we may esteem as friends and as citizens, but whose medical practice would be unqualifiedly different from our own; thirdly, there would be a goodly number of men who are unfortunately prevented from being one with us by the difficulties in the way of gaining membership in formally-organized bodies of regular physicians,or by an attachment to early associations, but who are homœopaths only in name, and who regret the inconsistent attitude in which they have placed themselves; lastly, there would be the chaff of the winnowing, a considerable, though not large, proportion of men and women who call themselves homœopaths to secure a share of an established practice, or because they think that the mental association of homœopathy with small and pleasant doses will prove profitable. These are creatures who are homœopaths for what the name is worth, and who would be eclectics, vitopaths or magnetic healers, if the financial outlook was better in any of these directions.

I agree most heartily with Dr. Roberts, that all obstacles should be removed from the way of these men, who, without sectarian beliefs, find themselves in sectarian societies and wish to unite with the regular profession; but it does not seem to me that the accidental wandering of homœopaths from homœpathic standards brings them into harmony with the organization which they still antagonize under the falsely applied name of allopathy.

A. L. Benedict.

174 Franklin st., Buffalo, June 30, '93.

Editor Medical and Surgery Reporter: Dear Sir:—There is a little point in Anæsthesia that I have never seen mentioned in any communciation on the subject, and yet is of such importance that it might not be amiss to call attention to it in a brief paragraph.

In many cases of anæsthesia at any stage there may occur long, deep sighing respiration. This may take place, and frequently does, immediately after an attack of vomiting or after slight evidence of return to consciousness, though it is just as apt if not more so, to occur during deep anæsthesia. It is not evidence of returning consciousness, but is exactly similar to or the same as that which takes place during or after periods of intense concentration during the waking period, as is commonly seen in churches, theatres, etc. It is an unconscious effort to inhale more air, and shows a defective or careless respiration. My only object in calling attention to this phenomenon is to advise all anæsthetizers to do what I have seen very few of them do. Remove the inhaler instantly and allow nature that which she is endeavoring to get.

This is where the disadvantage of an immovable apparatus comes in. It is possible that the amount of anæsthetic which may be drawn in from a saturated inhaler by one of these deep sighing respirations, during deep anæsthesia, might be just sufficient to carry the patient over the line. I would like also to give in my evidence against the custom of largely increasing the amount of vapor during and after attacks of vomiting with the idea of controlling the vomiting, especially is this dangerous in the later stages of the anæsthesia or operation.

Yours very truly,

Wm. H. Burr,

216 W. 9th St., Wilmington, Del.

If some men would get nearer to the Lord, they wouldn't have to make so much noise in church.

Don't try to carry all your religion in your head.

ABSTRACTS.

THE DRIP SHEET.

In a recent address before the New York Academy of Medicine (*Medical Record*), Dr. Weir Mitchell gives the following directions for the use of this agent by persons needing the modified rest-cure:

"What I dread most at the start, in all cases for rest, is grave insomnia. Whether it be accompanied by a state of mild mental excitement such as we all know, or is a pure incapacity to go to sleep or to stay asleep, or whether it be in popular medical belief a congested state, I am apt at once in bad cases to use twice a day lithium bromide, at first in thirty-grain doses, at noon, at 6 and 9 P. M., given in the malt or not, and soon decrease grain by grain. If I want a positive aid at bedtime, I prefer sulfonal in hot water. But of greater value are some of the hydro-therapeutic devices—and best of these is what is known, or not known, as the 'drip sheet.' Just how this is to be given is of the utmost importance. The following memoranda must answer to show how careful one must be in my opinion, as to these details. I give it here, in brief, much as I do to the patient not under the immediate care of a nurse. I cannot help adding that several of the most useful of the water processes are neither taught in our schools, nor so accurately in hydro-therapeutic text-books as to be of much value to the general practitioner.

Memoranda for Use at Bedtime of Drip Sheet.—Basin of water at 65° F. Lower the temperature day by day, by degrees, to 55° F. or to still less. Put in the basin a sheet, letting the corners hang out, to be taken hold of. The patient stands in one garment in comfortably hot water. Have ready a large, soft towel and iced water. Dip the towel in this, wring it, and put it turbanwise about the head and back of the ck. Take off night-dress. Standing front of patient, the basin and sheet hind, the maid seizes the wet sheet by o corners and throws it around the pa-nt, who holds it at the neck. A rough, nart, rapid rub from the outside applies e sheet everywhere. This takes but two inutes or less. Drop the sheet, let the tient lie down on a lounge upon a blan-t, wrap her in it. Dry thoroughly and roughly with coarse towels placed at hand. Wrap in a dry blanket. Remove ice-wrap, dry hair, put on night-dress. Bed, the feet covered with a flannel wrap.

If all this seems to you, as you read it, too absurdly minute, I shall feel some regret. Yet believe me, it is worth the trouble, and the drip-sheet is a remedy past praise. If it fail, a pack may succeed; but this is more familiar to you. I doubt if the use of the drip-sheet is as well known.

THE INDICATIONS FOR THE ENUCLEATION OF AN EYE are thus summarized by Jackson (*Philadelphia Polyclinic*):

1. The presence in the eye of a malignant new growth, as glioma, sarcoma, or tuberculosis. This indication is imperative, no matter how much vision the eye retains.
2. The presence in the eye of a foreign body, with iridocyclitis. If the injury be recent and the inflammatory process still active, and the patient cannot remain under observation, an eye with anything less than thoroughly useful vission should be sacrificed.
3. The presence of a foreign body in a blind eye.
4. Blindness with diminished tension of the eyeball, following perforation either from traumatism or corneal ulcer; most urgent after traumatic perforation of the exposed portion of the sclera.
5. Blindness from irido-choroiditis without perforation of the eyeball, if the patient cannot remain under observation.
6. Sympathetic inflammation, provided the exciting eye does not possess vision sufficiently good to be weighed against the chances of the sympathizing eye.
7. The actual presence of sympathetic irritation; not the risk of it, unless the patient is likely to be out of reach of surgical aid.
8. Persistent pain in a blind eye, sufficient to annoy its possessor or tempt him to the use of analgesic drugs.
9. Serious disfigurement of a blind eye, even if free from pain or risk of causing sympathetic disease.

CURRENT LITERATURE REVIEWED.

THE AMERICAN GYNECOLOGICAL JOURNAL for June.

Dr. Thomas H. Manley reports a

Fibro-Myoma of the Uterus and Broad Ligament of Forty-five Years' Duration.

The woman lived to be 76 years old. The tumor had been examined by numerous physicians, few of whom agreed on a diagnosis, the opinions ranging between ovarian tumor and hypertrophic fibrosis of the right lobe of the liver. At one time she was under the care of Dr. Gunning Bedford, and was very desirous of having an operation performed for relief; but, owing to his influence, it was not done. The case demonstrates that, under certain circumstances, the presence of a uterine fibroid is not incompatible with longevity. In the end, though greatly reduced in volume, yet it still persisted as a foreign body, was an inconvenience to her while she was on her feet, and was a constant menace to her comfort while in bed. At the post mortem it was noticed that no trace of the uterus remained, nor anything like a normal ovary. The abdominal muscles had atrophied as the result of the continued pressure. In his remarks on the treatment of uterine fibroids, the author says that nothing in the way of direct surgical treatment should be recommended till we have first given constitutional and local measures a fair trial. He thinks that electricity possesses useful properties, but denies that it will dissolve and scatter away a calloused old fibroid. The electro-puncture should be interdicted. When the cervical canal is short and the tumor low down in the pelvis, the cervix can be dilated and the tumor removed *en masse* or piecemeal. Especially may this be done in the case of submucous or intra-uterine tumors. The author thinks it a mistake to teach that metrorrhagia is never absent in cases of fibroid tumors, as he has seen cases in which the patient never had any hemorrhage. Hysterectomies for fibroids are justifiable when they have destroyed the uterus, particularly with those of advanced years. Abdominal hysterectomy is a highly valuable operation in skilled hands and under proper surroundings.

Dr. W. F. Metcalf presents "A Report of Two Cases of Marginal Eczema," in which local treatment was of no avail till after the sexual organs had been put in good condition. In one case an ovarian growth was removed, in the other a lacerated perineum was repaired.

Dr. C. G. Jennings contributes a paper on

The Induction of Labor in the Albuminuria of Pregnancy.

His experience leads him to look upon albuminuria as a very grave complication of pregnancy; one demanding from the physician the utmost care and the best judgment to bring to a favorable issue. Termination in the complete disappearance of the albuminuria before the end of pregnancy is, in his opinion, unusual. While the statements of many writers show that women frequently go to term and through labor without disaster, to permit her to run the risks to both herself and child of acute renal insufficiency seems rarely justifiable. In mild albuminuria before the seventh month, the case should be put upon proper medical treatment and carefully watched. If the conditions improve or remain stationary, interference may be delayed until it is certain that the child stands a good chance of living, well on in the seventh month. In severe albuminuria before the seventh month, with marked renal insufficiency and dropsy, labor should be induced as soon as it is seen that medical measures have little or no beneficial influence. These cases probably always terminate in spontaneous premature delivery, with the death of the child or convulsions. In albuminuria occurring after the seventh month, labor should be induced if the condition remain stationary after a week or two of proper medical treatment. Daily examinations of the urine should be made, and any marked increase in the albumen or a decided decrease in the urine solids should be followed by prompt interference. In severe cases seen for the first time during the seventh or eighth month, and showing a decided decrease of urine solids and much dropsy, artificial labor should be promptly induced.

Dr. R. B. Maury reports "A Case of Ovarian Pregnancy." The specimen was referred to Dr. Alan J. Smith for an opinion, and he reported it an undoubted case of true ovarian pregnancy.

Dr. B. E. Hadra presents "A Contribution to the Pathology of the Fourchette." Dr. A. W. Hitt discusses "The Proper Treatment of Laceration of the Cervix." The remaining paper is by Dr. Joseph Price, entitled, "Gynecology and the General Practitioner," and has been published in THE MEDICAL AND SURGICAL REPORTER for May 13, 1893, page 717.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES

for July. Dr. F. Forchheimer contributes a paper on

The Intestinal Origin of Chlorosis.

The author concludes, as the result of experiments upon animals, that the number of red corpuscles is diminished in the veins of the intestine, while the quantity of hæmoglobin remains the same; therefore, hæmoglobin is absolutely increased in the vein and each red corpuscle carries more hæmoglobin in the vein than in the artery. From this observation the conclusion can be drawn that, in the rabbit, hæmoglobin is taken up by the blood from the intestine, and that it must be formed either in the parts supplied by the arteries—i. e., the mucous membrane in its broadest sense—or within the intestinal canal. The author states in conclusion, that possibly some other origin for hæmoglobin may exist than in the intestine; from all evidences, however this is the principal source and in chlorosis the most important. He presents the results of the treatment by salol or hydro-naphthol (so called). No iron was used. The object of the treatment was to prevent abnormal decomposition in the intestine. The number of cases is too small to draw any conclusions from but the results were good.

Drs. Theodore Diller and J. J. Buchanan report

A Case of Sub-cortical Cyst of the Lower Part of the Left Ascending Parietal Convolution.

The case confirms, as much as a single case can, the generally accepted ideas concerning the localization of certain motor functions in the Rolandic region. It lends support to the opinion (upon which there is not so much unanimity) that there is no cortical representation of sensation in the pre-central convolution, and also offers distinct negative evidence in support of the view that this convolution is not related to the function of muscular sense. The hypothesis of Seguin, Mills and others, that when hemiparesis precedes spasm the lesion is sub-cortical is confirmed by the evidence presented by the case. From the surgical aspect of the case, the admirable control of hemorrhage during the operation by means of a rubber band around the head is worthy of mention. The operation, which was performed by Dr. Buchanan, proved successful as far as recovery from the surgical procedure is concerned. The spasms still continue but are lessened in number.

Dr. B. Farquhar Curtis contributes a paper on

Cases of Bone Implantation and Transplantation for Cyst of Tibia, Osteomyelitic Cavities, and Ununited Fractures.

After reviewing the different methods and materials used for the purpose, the author concludes that Senn's decalcified bone appears for the present to be the most practical material for use in ordinary cases, while we are waiting for the ideal of the future—the insertion of a piece of living bone that will exactly fill the gap and will continue to live without absorption. The author reports four cases successfully treated by bone implantation. The most rigid antisepsis is necessary in the operation and the author cautions against the too free use of iodoform on account of the dangers of poisoning from it. Such an accident has not happened to him but the author thinks the caution necessary.

Dr. Judson Daland discusses

The Treatment of Cholera by Hypodermoclysis and Enteroclysis.

he treatment is principally of value in the vacuant or collapse stage of the disease. he solution used for hypodermoclysis consists of two small teaspoonsful of sodium hloride to a quart of hot water, which has een distilled and sterilized. The operation s one of great simplicity, requiring only a nall-sized aspirating-needle and canula which is attached to the rubber tube of an ordinary fountain syringe. The best point for the introduction of the needle is in either flank, between the ribs and the crest of the ilium; the inner surface of the thighs may also be used. Observation has shown that there is danger in the injection of fluids in beneath the skin of the neck, as two cases of fatal œdema of the larynx following the operation have been reported. The operation should be performed under strict antisepsis. The first injection for an adult should be one or two quarts, and the solution should have a temperature of 110°F. at the reservoir which will be reduced to 105° F. after traversing the long tube to the subcutaneous space. The objection to enteroclysis that the injection will not pass the ileo-cæcal valve, the author believes to be without foundation. He reports that several patients to whom injections of tannic acid were given, vomited tannic acid, thus proving that the fluid passed the valve. The liquid for enteroclysis should also have a temperature of 110° F. which will be reduced about five degrees by its passage through the tube. Besides setting forth the value of the above procedures, the paper also deals with the general treatment of cholera.

Puerperal Infection considered from a Bacteriological Point of View, with Special Reference to the Question of Auto-Infection

is the title of a paper contributed by Dr. J. Whitridge Williams. After exhaustively reviewing the opinions of the observers of this subject, the author concludes that the general practitioner will do best for himself and his patient if he acts as if there were no such thing as auto-infection, and does not attempt to deal with any organisms which may exist in the vagina, aud contents himself with the most scrupulous cleanliness on his part and careful disinfection of the external genitals. The author also believes that it is impossible to disinfect the vagina with the means ordinarily at hand, and with the patient in her bed. This of course does not apply to well regulated hospitals, for there the douche may be given with greater antiseptic precautions. The best results will be obtained when, in addition to the most rigid subjective antisepsis, we consider each case separately, and make a preliminary microscopic examination of the vaginal secretion. If the secretion be normal there can be no possible justification for the use of the douche, but if pathological there may be.

Dr. Heneage Gibbes contributes a paper on "The Parasitic Nature of Cancer" in which he says that the most careful examination of specimens, hardened after a method which gave normal appearances in sections of normal liver, failed to show anything that could be construed into any form of parasite.

The remaining papers in this issue are: "A Suggested Improvement in the Correction of Lenses for Photomicrography, Photography, and Photastrography" by Dr. Henry G. Piffard, and "Simple Idiopathic Muscular Atrophy beginning in the Flexors of the Hips—Buzzard's Form" by Dr. Howell T. Pershing.

PERISCOPE.

MEDICINE.

Differential Diagnosis of the Various Forms of Convulsions in Young Children.

Dr. Landon Carter Gray in discussing this subject before the New York Academy of Medicine, said that it involved the consideration of a large number of diseases, for a convulsion is a symptom, and not in itself a disease. A broad general classification of convulsions might be made into organic and functional. We know very little of cerebellar disease in the child, and our attention must be directed entirely to the cerebrum. In the organic class are the convulsions due to meningitis, encephalitis, meningo-encephalitis, and hydrocephalus. An organic lesion may be suspected when there is paralysis of some function of the cerebrum, as of sight or hearing. Cerebral hemorrhage may alone cause convulsions, and may be local or widespread. Organic lesions in the brain may cause convulsions, and may also impair mental power. Recently much has been said regarding the possibility of mental disturbance due to premature ossification of the bones of the skull. Lannelongue's operation has become a fad. It is useless, however, where there is distinct evidence of an organic lesion, as paralysis, blindness, or deafness. It can be of value only when the mental power alone is reduced.

A most interesting subject is that of functional convulsions. Chorea is sometimes mistaken for disorders of convulsive nature. Chorea appears under two forms. In the one the movements are fibrillary and very quick in their occurrence and beyond the control of the patient; in the other the motions are more gradual and wormlike. Experiments have recently been made regarding the convulsions due to digestive disturbance. It has been found that the normal putrefaction which always occurs during digestion sometimes becomes abnormal or irritative. In these cases the patient is slightly dyspeptic, and indican may be detected in the urine. These investigations are interesting and important, as they throw light upon facts which have long been known regarding the close association of digestive disorders and convulsions. Peripheral irritation has long been considered a cause of convulsions. There is no positive proof that ovarian disease ever of itself causes convulsions. Removal of the disorder is rarely followed by more than temporary relief. True epilepsy is masked by paroxysms which occur in series. This fact must be considered in discussing the disease, and in drawing conclusions regarding the treatment. No one can say at what period epilepsy is cured. The convulsions sometimes appear months or even years after a cure has apparently been effected.—*Med. Review.*

Etiology of Whooping-Cough.

Dr. Ritter, of Berlin, has been making some researches into this subject. When it was possible to obtain any expectoration at the end of a paroxysm of coughing, the sputum was received into a sterilized vessel and carefully washed with distilled water. Small, opaque particles were generally found, and these were removed with due precautions and cultivated on agar-agar. Small colonies appeared within twenty-four hours. Under the microscope these were found to consist of diplococci. The colonies were opalescent and grayish in color, and adhered firmly to the surface of the cultivating medium. These diplococci are different from those described by Fraenkel as present in pneumonia. Although his experiments on animals were not yet completed at the time the report was made to the Berlin Medical Society, yet Dr. Ritter had already obtained results which seemed to point to this micro-organism as the specific agent in the production of pertussis. —*N. Y. Med. Record.*

SURGERY.

Surgery of the Gall-Bladder.

An excellent *resume* by Pick of Czerny's publication on the present status of this branch of surgical work merits attention. Czerny bases his conclusions on eighteen cases. He considers that cases without discomfort, even if the gall-bladder can be felt distended with calculi, should not be interfered with surgically. In these cases there may be short attacks of colic with jaundice; but they are readily relieved by medicinal treatment, and are not of frequent occurrence. The surgical cases are when the symptoms are severe, the attacks frequent, and the patient is not free from pain or discomfort during the remissions. The operative cases are classed either as those without long-continued icterus or with continued icterus. The cases without icterus often are difficult of diagnosis. Extirpation of the gall-bladder is not considered a desirable operation, since it does not prevent the recurrence of calculi in the dilated hepatic ducts; also, since the gall-bladder is valuable in forming a new outlet for the biliary current by its union (cholecysto-enterostomy) to the duodenum in cases when the common duct is occluded. In the non-icteric cases the surgeon has to deal mostly with the gall-bladder alone, since the ducts, except the cystic, are patent. The method of operating in two sittings is indicated when the contents of the bladder is purulent. The method used where the immediate incision is made is to pack the gall-bladder in iodoform gauze so as to shut off the abdominal cavity; then incise, and wash out with a boric-acid solution. The advantage of the open abdominal wound is that the exterior and adjacent organs can be examined. When the bladder is opened after adhesions have formed, the interior of the bladder only is accessible, and the rest has to be left to nature.

An attempt at suture of the bladder wound and its replacement in the abdomen should never be done except when the bladder is in a normal condition.

In cases of suppuration or stenosis of the cystic duct the formation of a temporary fistula is recommended.

The typical operation for calculi is incision evacuation of calculi, suture of the gall-bladder, abdominal drainage for a short time. Extirpation is only indicated in severe or carcinomatous degeneration. When the common duct is occluded, operate as long as the patient's condition will permit. If the obstruction (stone or flexions) cannot be removed cholecysto-enterostomy is recommended. The incision recommended is a right-angular one, the vertical short arm in the linea alba. The horizontal arm immediately below the umbilicus and extending to the right. This, Czerny thinks, gives the best opportunity to investigate the ducts as well as the gall-bladder.

The risk to life is now less than for operations on the urinary bladder.—*Ann. of Surgery.*

GYNECOLOGY.

Danger of Vaginal Pessaries.

Dr. Neugebauer, of Warsaw, has published an exhaustive analytical monograph on this question, so important in these days when gynecology is widely praeticed by the surgeon and physician as well as the specialist. Two hundred and forty-two cases of injury have been collected and analyzed, five more being added in an appendix. Tabulating the results, Dr. Neugebauer presents the medical public with the following formidable statistical records: Twenty-three cases of perforation of rectum alone by the pessary; twenty cases of perforation of the bladder alone; ten cases of perforation of the bladder and rectum; one case of ureteric fistula alone; one case of ureteric and vesico-vaginal fistula; one case of urethral-vaginal fistual; two cases of perforation of Douglas' pouch (neither fatal); three cases of perforation of the vaginal walls, the extruded portion of the pessary lying in the pelvic connective tissue; and six cases of entry of a vaginal pessary into the uterus.

As to the age, one patient was ninety years old; she had worn a wooden pessary forty-ive years. The youngest was nineteen. 'he time during which the pessary was worn and often forgotten) is tabulated, the non-genarian just mentioned heading the list; wo other wemen wore their pessaries for forty years; and twenty, besides these three, wore the instrument over twenty years. The toleration of the vagina is very varied in different individuals, even for the same kind of pessary; thus in some cases the pessary became fixed, and tended to ulcerate into the vaginal walls within two or three months, whilst in others the appliance was worn over twenty years without causing any objective or subjective troubles. How fetor could have been absent in these tolerant cases it is hard to understand. We must remember that the same kind of pessary is not always introduced with the same skill, whilst other pessaries may be bad in principle or ill-made by the manufacturer, and, lastly, the patient very frequently forgets that she wears a pessary, hence the share of blame which the introducer of the intrument should bear is not uniform.

When the patient is not aware that the instrument has been inserted, as is often the case, the medical attendant must undoubtedly have shown great skill and gentleness in introducing it, but he may not have taken sufficient pains to impress upon her memory the fact that the instrument has been introduced, and must not be worn for many months. This is the commonest cause of pessary accidents at the present time, for the art of introducing pessaries is readily acquired, experience is easily obtained, and the favorite pessaries are no longer barbarous instruments, whilst the patient may misunderstand such information as "I have passed a Hodge," or "You are wearing a Zwanck," and go away with the beleif that she is *not* wearing a pessary. As to the merits and disadvantages of the almost innumerable forms of pessary, we must refer the reader to Dr. Neugebauer's valuable paper. The moral is that the introduction of a vaginal pessary is a minor surgical proceeding, but if performed carelessly may lead to results in no sense "minor," but, on the contrary, very serious. —*Britsh Medical Journal.*

The Sensitiveness of the Peritoneum.

Tait (*Lancet*, January 21, 1893) believes that the peritoneum is exquistely sensitive, as shown not only by the severe pain experienced by patients during a sudden internal hemorrhage, but by the agony which they suffer when it is necessary to open the abdominal cavity without anæsthesia. Moreover, he has frequently noticed that, on touching the peritoneum in women who were incompletely anæsthetized, reflex movements were frequently produced, indicative of the pain which was experienced. He addressed inquires to several different abdominal surgeons, many of whom expressed an opinion directly contary to his own. Sutton believes that while the healthy peritoneum is not especially sensitive, when inflamed it is highly so.

Suturing the Ureters.

Trekaki (*Gaz. des Hopitaux*, 1892, No. 62) infers from experiments upon animals, as well as from the cases reported by Pozzi and Le Dentu, that patients do better when the proximal end of a wounded ureter is stitched into the abdominal wound than when it is turned into the rectum or vagina, since in the latter case infection may be carried to the renal pelvis, causing pyelitis.

He suggests that in cases of suppuration of the kidney, instead of extirpating the organ, it should be exposed by the usual lumbar incision, and the ureter drawn out and divided, after ligating the distal portion, the proximal end being stitched into the wound. This operation would be indicated in cases of inoperable pelvic tumors compressing the ureter, after traumatic rupture of the duct, and even in cases of severe cystitis, in order to protect the kidneys (?).

NEWS AND MISCELLANY.

A Valuable World's Fair Book.

The Passenger Department of the Baltimore and Ohio Railroad Company has prepared for general distribution a handsome pamphlet descriptive of the scenic and other attractive features of that road from New York to Chicago. This book should prove invaluable to those visiting the World's Fair. In its artistic cover, illustrations and reading matter, it is fully up to the high standard which has been fixed by the B. & O. for publications of this character. The scenery en route, which has gained for the B. & O. the richly deserved sobriquet of "Picturesque," the public buildings at Washington, old Harper's Ferry, Luray Cavern, and other attractive points are faithfully portrayed. The value of the publication is increased by descriptions and illustrations of the principal buildings at the World's Fair. This book can be procured free of charge upon personal application to ticket agents, B. & O. R. R. Co., or you can have it mailed to you by sending name and address with five cents in stamps to Chas. O. Scull, General Passenger Agent, Baltimore, Md. World's Fair tourists should bear in mind that the B. & O. is selling tickets at very low rates good going via Washington and returning via Niagara Falls.

Deer Park and Oakland.

To those contemplating a trip to the mountains in search of health and pleasure, Deer Park, on the crest of the Allegheny Mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Allegheny range. The hotel is equipped with adjuncts conducive to the entertainment, pleasure and comfort of its guests.

The surrounding grounds, as well as the hotel, are lighted with electricity. Six miles distant on the same mountain summit is Oakland, the twin resort of Deer Park, and equally as well equipped for the entertainment and accommodation of its guests. Both hotels are upon the main line of the Baltimore and Ohio Railroad, have the advantages of its splendid Vestibuled Limited Express trains between the East and West and are most desirable resting places for World's Fair tourists. Season Excursion tickets, good for return passage until October 31st, will be placed on sale at greatly reduction rates at all principal tickets officers thoroughout the country. One way tickets reading from St. Louis Louisville, Cincinnati, Columbus Chicago, and any point on B. & O. system to Washington Baltimore, Philadelphia, or New York, or vice versa, are good to stop off at either Deer Park or Oakland, and the time limit will be extended by agents at either resort upon application.

The season at these popular resorts commences June 15th.

For full information as to hotel rates, rooms, etc., address, George D. DeShields, Manager, Deer Park, or Oakland, Garrett County, Maryland.

ARMY AND NAVY.

U. S. ARMY FROM JUNE 25, 1893, TO JULY 1, 1893.

By direction of the President, Captain Marcus E. Taylor, Assistant Surgeon, will report in person to the president of the Army Retiring Board at Fort Logan, Col., when required by the board, for examination by it.

First Lieutenant Frank T. Meriwether, Assistant-Surgeon, U. S. Army, is relieved from duty at Madison Barracks, N.Y., and ordered to Fort Logan, Colorado, for duty.

Captain Louis A. La Garde, Assistant Surgeon, will, in addition to his present duties in connection with the World's Columbian Exposition, furnish the necessary medical attendance for the officers and enlisted men of the Army on duty at the Exposition grounds.

Captain William C. Shannon, Assistant Surgeon, in addition to his duties at the office of the Surgeon General, is assigned to duty as assistant to the Attending Surgeon in this city.

The leave of absence granted Major Washington Matthews, Surgeon U. S. Army, is extended one month.

Captain Freeman V. Walker, Assistant Surgeon, now on leave of absence at the Army and Navy Hospital, Hot Springs, Arkansas, will proceed at once to Fort Trumbull, Conn., and report at once to the commanding officer of that post for temporary duty, relieving Major Henry M. Cronkhite, Surgeon.

Major Cronkhite, upon being relieved by Captain Walker, will proceed to Fort Clark, Texas, and report in person to the commanding officer for duty at that post.

First Lieutenant Alexander N. Stark, Assistant Surgeon, is relieved from duty at Fort Monroe, Virginia, and ordered to Fort Clark, Texas, for duty; relieving Captain Edgar A. Mearns, Assistant Surgeon.

Captain Mearns, upon being thus relieved, will proceed to Nogales, Arizona, and report to the senior member of the commission appointed for the location and marking of the boundary between Mexico and the United States, for duty with the commission.

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ORIGINAL ARTICLES.

WHAT ARE THE INDICATIONS FOR REMOVAL OF THE UTERINE APPENDAGES?*

MARIE J. MERGLER, M. D., CHICAGO, ILLINOIS.

The student who has an opportunity of listening to the opinion of half a dozen clinical teachers on the subject of indications for or against removal of uterine appendages in a given case, will often be surprised at their variance.

The patient who has suffered some time from dysmenorrhœa or from other pelvic pains, whether she seeks the advice of a number of the best general practitioners recommended to her at her home, whether she goes from one gynecological clinic to another, or whether she consults as many of the "best specialists" as her purse can afford, is often equally surprised at the variance of the verdicts. She will sometimes be undecided for months, and even for years, as to what course to pursue.

One has told her "try to allay the inflammation by local treatment and we can operate as a last resort." Another says: "Removal of the appendage is the only road to health; delay is hazardous; e risk of an operation nowadays is re- .ced to a minimum." A third doctor ys, "you will probably never regain alth without the operation, but on the her hand you must take your own iances in choosing a measure which en- angers life, and even then we cannot uarantee success." If this patient fol- ws the advice of the first, who said "Wait," she may be rewarded by perfect health, sometimes on account of judicious treatment and sometimes without any treatment whatever; on the other hand, possibly she and her friends may regret the delay if she suddenly succumbs to an acute septic pelvic peritonitis.

How about the patient who submits to the operation? She usually survives, frequently the ultimate result is all that has been promised; but almost every physician can recall some particular case or cases in which she is even worse than before.

I have in mind now one of these unfortunate ones who probably had consulted every gynecologist in this city, and who has tried to be admitted to the gynecological wards of several of our hospitals since her first operation. The ovaries had been removed for pelvic pain. She made a good recovery from the operation, but when she was able to be about the old pain returned with increased severity. For the vesical irritation of which she subsequently complained, the urethra had been dilated several times. One of the physicians treated her with electricity, but without success. Finally, removal of the uterus was suggested as a last resort. Whether she underwent this operation I do not know; but my impression of the case is that no surgical operation could bring relief to her, on the contrary any measure which would lower vitality would aggravate the trouble, for she was suffer-

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Read before the Illinois State Medical Association, 13.

ing with a neurosis of central origin.

Those who have had a very large experience, and who have watched their patients for some years after the operation, will be able to select with considerable certainty the cases which may, or which may not be benefitted, but it is to be regretted that those who have their experience yet to gain, will find much in our literature that is contradictory and even misleading. I will except conditions in which the pathological changes are very conspicuous. On these there is no material difference of opinion; for instance, the reader will hardly be in doubt as to the propriety of removing ovarian tumors. The same applies to tubes which are considerably distended by fluid contents, or whose size is markedly increased by a neoplasm. Removal of the ovaries with the view of arresting the growth of some uterine fibroids is pretty generally sanctioned. The result in well selected cases is often most gratifying; the hemorrhage ceases and the tumor gradually shrinks.

So much for indications which are generally admitted. We come next to those which are the object of so much contention; indications which, when rightly apprehended, have been the means of inestimable benefit, but which, when misapprehended, have brought upon the sanguine operator the criticism of his brethren and the disappointment and sometimes the curse of his patient.

The indications just referred to are as follows: Inflammatory conditions of the ovaries or tubes, displaced and enlarged appendages, dysmenorrhœa, menorrhagia, epilepsy, hystero-epilepsy and various other neuroses.

My own observation has led me to conclude that the skepticism concerning operative gynecology in general and the utility of removing uterine appendages in particular, is not without foundation. After all that has been written in this country and abroad in favor of conservatism and against "too much surgery," the lessons are still too often left unheeded. For, on the one hand, claims of success are made in premature reports which do not stand the test of time; on the other, indications are imagined when they do not really exist. Those who assume the responsibility of deciding when it becomes necessary to remove the uterine appendages, may profit by a careful study of the writings of Doleris, Olshausen, Hegar, Lusk, Polk and others who have given this subject conscientious and careful consideration.

A thorough acquaintance with the works of standard authorities is one of the essentials to success; but even more essential than this is an accurate knowledge of the normal and pathological anatomy of the pelvis, and the acquisition of considerable skill in physical diagnosis. In the majority of cases where unnecessary operations have been advised, or where operations have been performed with very disappointing results, I believe it has been due to one of the following causes:

1. Too hasty decision to operate.
2. Mistaking functional disturbances of the appendages for primary lesions.
3. Mistaking hereditary taints and cerebral neuroses for the direct reflex of a local and acquired pelvic disease.

Too Hasty Decision. I recall at least a score of patients who have come to me from other physicians, on whom an operation had been urged as necessary, and who subsequently regained excellent health without it. One of these had been seen but once, examined hastily and told to go to one of our hospitals as soon as possible for removal of the ovaries. Very much worried, she went home, had a good cry and then concluded to see what another would advise. I had no knowledge of her previous experience when she consulted me. I diagnosed the case as endometritis with slight parametritis, and gave the patient a good promise as to recovery, but a guarded one as to time. I noticed at the time the patient asking rather anxiously "if her ovaries were not diseased" but failed to suspect a reason for anxiety. Her digestive function was very much disordered, she suffered with a severe headache, and her general nutrition was below par, as is usual in these cases. Six weeks of rest in bed, douches, careful dieting and tonics made a different woman of her. Her menstruation was painless, she could digest simple food and had gained in flesh; her headache was better but not entirely relieved. Suspecting eye strain, I sent her to an oculist, who fitted her with glasses which improved her head symptoms materially. This was two years ago; she is still in good health, and, when I saw her about a month ago, was pregnant.

Another case was one of well marked salpingitis and ovaritis. She had entered a hospital in a neighboring state and had made all preparations for removal of the appendages, but when the time of the operation arrived she lost courage and fled. As there was considerable swelling of the right tube, and she stated she had been a sufferer for many years, I told her frankly it was very doubtful if anything but an operation would help her, but if she was willing to put herself under treatment for six or eight months she might improve sufficiently to make an operation unnecessary. Nine months from that time she went home apparently well, and had continued to feel well for two years when last I heard from her.

Inflammatory conditions of the ovaries so frequently yield to judicious treatment that in every instance it should have a fair trial before the radical operation is urged. The same applies to inflamed tubes. Catarrhal inflammation of the mucosa of the tubes is usually simply an upward extension of an endometritis, and both may be self-limited. The infectious form is more obstinate and more likely to undermine the general health, and, indeed, often threatens life. But even in these cases if the conditions for drainage are favorable, recovery without removal is possible. Rest, antiphlogistics and drainage will often accomplish wonders. I admit that the cases of ovaritis and salpingitis due to infection, may at some time or other unexpectedly light up an acute pelvic peritonitis which proves fatal, yet this can hardly be regarded as an unqualified indication for immediate removal, for the number of actual deaths from that cause is very small in proportion to the number of appendages thus diseased.

The discomfort due to displaced ovaries is very frequently amenable to milder measures, especially where no firm adhesions exist. Neither displacement *per se*, nor enlargement of one or both ovaries are indications for removal. Both may be the natural censequence of a retroverted uterus, and all the bad symptoms and the enlargement will subside as soon as that organ is replaced and kept in position. Marked ovarian enlargement, associated with grave local and reflex disturbances, may be very transient. It is usually due to venous stasis and is particularly noticeable just before the menstrual period.

The following was to me an instructive case some years ago. I was called to the country to see a patient and her daughter. The latter was lying in bed suffering with severe pelvic pains. The mother stated that the girl, who was fourteen years old had never been well; that she had menstruated for the first time six months previous, and since that time had paroxysms of severe pelvic pain associated with great mental depression. The girl seemed very anemic and not well developed physically, and had been subject to constiption. On making a pelvic examination I found a small retroverted uterus, and the right ovary of the size of a large hen's egg, prolapsed and very tender. The uterus could be easily replaced. The ovary was so large and resistant that I took it to be a small dermoid, but requested the patient to call at my office in a few weeks for a second examination. In the meantime I prescribed iron and laxatives. When she presented herself a month later, the ovary was normal in size and the pelvis free from pain. The patient had menstruated soon after my first visit. The enlargement in this case must have been due to the displacement and premenstrual congestion.

Mistaking Functional Disturbances Due to Other Causes for Primary Disease of the Ovaries aud Tubes.—Women whose general nutrition is disturbed, or those who are subject to great nerve strains, and those who are overworked and underfed are very likely to suffer from dysmenorrhœa. Strict attention to diet, change of occupation and rest are indicated in these cases, and will often remove the difficulty without any local treatment whatever.

I have known functional disturbances, particularly dysmenorrhœa and menorrhagia due to the lithic diathesis or constipation, to be mistaken for chronic ovaritis.

Hastening the menopause by removal of the appendages would hardly be the most scientific treatment in these cases.

Mistaking Hereditary Taints and Central Neuroses for the Direct Reflex of a Local and Acquired Pelvic Disease. The removal of the ovaries and tubes has been practiced successfully for severe forms of epilepsy, hystero-epilepsy and different forms of psychoses; but it is very essential before considering this measure in a given case, to determine whether these neuroses are really reflexes of genital origin, or whether our patient is haunted by the ghosts of a neurotic ancestry. Should the latter be the case, the removal of the ovaries will aggravate the neuropathic tendency.

Some authorities claim that this operation is only justifiable where we can demonstrate the presence of ovarian disease by physical examination. Other equally good authorities claim that, since grave psychical and other reflex disturbances do occur in cases where the seat of the lesion could not be previously determined, the operation is in some of these cases justifiable, since the field for this operative interference is still to be determined to some extent in an experimental way. This belief, however expressed by men of large experience who have given the subject careful study in all its phases, offers no excuse for hasty decision, without acquainting patients and their friends of the comparative uncertainty as to the results in this particular class of cases. Nor does it justify the proceeding to the removal of organs about whose size, form and position the advisor does not even pretend to have any definite knowledge. This I have known to be done. Unfortunately, it is much easier to acquire the technique of the operation than the judgment of when to operate.

In conclusion, up to the present time the experience of our best authorities would define the legitimate limits of the operation as follows :

1. Existence of neoplasms in the appendages.

2. Hernia or prolapse of the ovary, when irreducible and when producing urgent symptoms which do not yield to palliative treatment.

3. To the arrest of the growth of uterine fibroids. Here the limits can hardly be said to be definitely fixed. As a rule, however, the operation may be taken into consideration for tumors which are submucous or interstitial, before the uterus has attained a great size (Olshausen puts it at the size of a four months pregnancy). It may also be considered in fibroids when the symptoms are urgent and when either on account of cardiac weakness or from the presence of nephritis, so common in fibroids, the more radical though more dangerous, operation of laparo-hysterectomy would be attended with too much risk.

4. Inflamed conditions of the appendages, whose symptoms render the patient's life a burden, and which have resisted a fair trial of palliative treatment. These conditions when complicated by extensive adhesions of the organs, are less likely to yield to mild measures. Even in these cases the breaking up of firm adhesions, after abdominal section without removal of the ovaries and tubes, has been followed by relief of the symptoms.

5. The presence of pus in the ovary and encysted pus in the tube, as a rule require the radical treatment.

6. Marked reflex neuroses whose origin may be traced directly to diseases of the appendages.

These indications can be but general guides; an inflexible rule cannot be laid down. Every case must be studied by itself and at all times removal should be regarded as the last resort.

A Slight Mistake.

An instance where a bad cold caused a startling conversation.

There is a joke being told here at the expense of a modest young newspaper man in a neighboring town which is so good it ought to be true, says the *Bristol News*. The young man in question, it appears, was recently invited to a party at a residence where the home had recently been blessed with an addition to the family. Accompanied by his best girl he met his kind hostess at the door, and after customary salutations asked after the welfare of the baby. The lady was suffering from a severe cold, which made her slightly deaf, and she mistakenly supposed that the young man was inquiring about her cold. She replied that though she usually had one every winter this was the worst she had ever had; it kept her awake at night a good deal at first and confined her to her bed. Then noticing that the scribe was becoming pale and nervous, she said that she could see by his looks that he was going to have one just like her's and asked him if he wished to lie down.

The paper came out as usual the next week, but the editor has given up inquiring about babies.

CLINICAL LECTURES.

RECURRENT CANCER, TALIPES, ABSCESS OF NECK, CRANIOTOMY.

ROSWELL PARK,* A. M., M. D.

I am about to show you a case of disappointment, not to me but to the patient, who came here yesterday from a distance for the purpose of submitting to operation for recurrent cancer of the breast. The trouble was first noticed last January; on March 26, the entire left breast was removed and in May, pain began to be felt in the arm as if there were rheumatism. At the present time, ten months after the inception of the disease, there is great limitation of motion in the left arm. You can see the scar of the operation on the chest, but I find no scar in the axilla where I should like to, because I make it a rule always to clean out the axilla in a case of malignant disease of the breast whether involvement of the lymph-nodes is apparent or not. The disease has evidently extended to the tissues about the brachial plexus and I have told the patient that any operation that would be efficient, would probably be fatal because there is so much to be removed. Disarticulation at the shoulder—as recommended by Esmarch—would be necessary and even this would probably not eradicate the disease. There is no history of hereditary predisposition to malignant disease except that a maternal aunt died of what was in all probability cancer.

The case not being operable, I have suggested inoculation with erysipelas, a procedure which has been found to be followed with beneficial results.

This child, eighteen months of age, has a mild club-foot which requires a severing first of the tendo Achillis, because the toes can not be drawn up, and then of the plantar fascias or possibly of one or two flexor tendons, in order to overcome the excessive arching of the foot. There is also some tendency to inversion but the main trouble to relieve is the shortness of the tendo Achillis. You can readily supply the technical name of the deformity—talipes equino-varus.

After performing tenotomy I find that the foot can be brought up in flexion but the tightness of the plantar fascia still requires relief and I now divide that structure subcutaneously, passing the knife outward through a small opening at the inner side of the arch of the foot. The foot can now be restored to its normal position and I shall dress it with a starch bandage. You notice that even now, although the foot can readily be placed in the normal position, the inner tendons pull it back into the old deformity just as a horse's head is pulled to one side by a bridal rein. After the wounds have healed, it will be necessary to resort to massage and electricity, applied to the peronei so as to tighten the loose bridle rein and bring the foot around.

Seven months ago I operated on this young woman, who had been walking on the external malleolus on account of a bad form of club-foot. Over the malleolus had developed a large bursa—an instance of a cyst of new formation serving a conservative purpose. The sole was turned up against the other foot. The operation of astragalectomy was made as aseptically as possible and the limb was done up in a plaster dressing. There is still a little soreness of the foot when the patient walks too much but otherwise she has no trouble. You notice that the foot is shorter than the other. This is not due to the operative interference but to previous failure to develope from non-use. The shoe worn is like that on the other foot except that the heel is raised a trifle to compensate for the shortening of this limb. If I had done an ordinary tenotomy here and then relied on a club foot shoe to correct the deformity, the same result would have been attained after two or three years. In as many months she has as good a foot from the severer measure of removing one of the tarsal bones in order to straighten the foot. It is a result such as this that justifies the more radical operation. The patient has not yet recovered by any means as much use of the foot as she will later, for she is old enough to aid the surgeon by intelligent co-operation. In the little child on whom I did a tarsectomy four weeks ago, the starch dressing was left on two weeks and a half and then replaced by a plaster bandage. After that is removed, it will be necessary to keep on a club-foot shoe for some months as the child can not be relied upon to make the voluntary effort to roll the foot outward and to "toe out."

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"As the twig is bent, the tree is inclined" and, in applying this old maxim to orthopædic surgery, we must bear in mind the necessity of maintaining the corrective impression night and day. In the case of the little child, direction must be given to the parents to keep the club-foot shoe on continually except as it is occasionally removed for a few minutes to allow massage or for purposes of cleanliness.

This child, eighteen months old, has been brought here with a swelling in the neck which has enlarged rapidly in the last few days. On examination I find fluctuation and presume that the case is one of acute inflammation of some of the cervical lymph nodes. When such a case presents itself to you and there is no ostensible reason for the enlargement, I would advise you to examine the teeth, the tonsils and the ears to see if there is any septic process which may account for involvement of the adjacent nodes. Failing to find an explanation from this examination it would be well to turn your attention to the scalp, for eczema of this region may be accompanied by inflammation of the lymph nodes. The tonsils are like sponges, having crypts which retain infectious debris,and there may follow systemic symptoms from the absorption of this material. Such absorption takes place through the lymph vessels to which the lymph nodes bear the relation of filters. It is in the nodes, therefore, that septic material is retained and suppuration is set up. If the infectious material is tubercular, a tuberculosis of the lymph nodes results which has been called scrofula.

Now in such an inflammatory tumor as this, with fluctuation and the tenderness which was manifest before the child was anæsthetised, we can be confident that we have an abscess and I do not think it would be a mistake to make free incision into it. But in order to demonstrate absolutely that the tumor is not an aneurism or a soft mass not containing pus, I will follow for your benefit the absolutely safe method of first introducing a fine needle connected with a syringe by means of which pus is removed. The indication for free drainage is clear. You will notice that the field of operation is rendered aseptic before the knife is used. This may not be necessary since we expect to have it flooded with infectious matter, but few patients who are brought to a hospital are injured by the application of water, the use of the antiseptic solution causes only a moments delay, and we can be sure that, if further signs of sepsis develop, they are due to internal sources and not to any germs that we have introduced. This abscess seems quite extensive and I may have to scrape it out, so that an incision at least an inch long will be necessary. I shall follow one of the creases in the skin so that the scar may not show after it has healed. You might say that in cutting transversely I am in greater danger of dividing vessels, but the abscess is immediately below the superficial fascia and there are no large vessels to be encountered. My finger goes into a cavity the size of a robin's egg after a considerable quantity of pus has been evacuated. The walls of the cavity are thick and tough but do not require so much scraping as I had anticipated. The cavity is washed out with a hydrogen peroxide solution.

On examining the child I have found nothing wrong in the mouth or throat and the ears and scalp are apparently healthy. There must be an underlying cause for every abscess, but I discover none here. Alterative tonics will be administered, the wound will be dressed daily with a little tent of iodoform gauze to prevent the adhesion of the fresh raw edges until the cavity beneath has closed by granulation.

This patient is a little imbecile child on whom I purpose to perform the operation of craniotomy. The word *craniotomy* in this connection has not its obstetrical meaning, but is used in the literal significance of cutting the cranium. The object of the operation is to divide the skull in such a way as to enlarge its capacity and allow the brain to expand. The term craniectomy has been more recently applied to this operation, but as we cut *out* nothing but the narrow strip of bone that corresponds to the width of the saw, I think that craniotomy is the preferable term. The operation consists typically in making a linear, longitudinal opening in the skull as near the middle line as is possible without wounding the superior longitudinal sinus. The opening I prefer to make on the left side, because it is on that side that the centres of speech and those governing the movements of the right side of the body are located. In the present case I expect to do more than the usual operation, intending to extend the incision in a semicircle or horse-shoe, and spring up quite an area of the side of the skull. This lid or operculum will not be cut loose from its vascular connections, for the soft parts will remain attached to it, and as the bone itself is not broken entirely loose, there will remain a hinge or bridge containing an abundant supply of blood vessels to supply nutrition. You have recently seen another case of craniotomy in which a Y-shaped incision was made, and you know that, whatever the manner of separating the skull, the object of the operation is to afford a relief from intracranial pressure.

We have had great difficulty in shaving this child's head, for he would not keep still. Except during sleep, most of his time is spent in jumping up and down on his hands and knees in his crib, playing a kind of idiotic leapfrog with himself. It has been noticed that the child's radial pulse is good on one side and scarcely distinguishable on the other, so that there must be some anatomical anomaly.

Under chloroform anæsthesia, the head is shaved and then cleansed with a mixture of turpentine, alcohol and ether to remove the sebaceous matter. The field of operation is now irrigated with a bichloride solution and the head bound by an Esmarch ligature to prevent loss of blood as far as possible. Towels wrung out of a bichloride solution are used to protect the shaved scalp from the encroachment of septic germs from the face and neck. The operation will proceed under ether anæsthesia.

The first incision is in the form of a semicircle, seven cm. in diameter, about the left parietal eminence. If I were making an ordinary trephining, I should now dissect up this semicircular flap; but, as its vascular connection with the bone must be maintained, access to the skull is obtained by dissecting away the scalp to the outer side of the incision, and, for the sake of greater freedom, a connecting incision, extending straight backward, is made. With the DeVilbis saw a groove is marked in the bone. I shall work with chisel and bone-punch in this groove. It is a term of reproach to call an individual thick-headed, but the epithet seems to have an anatomical justification, for almost every idiot on whom I have operated has had an abnormally thick skull. In order to be able to handle the tools intelligently, I am going to learn the exact thickness of bone in this case by means of the trephine. The small button of bone which is removed measures 5 mm., quite an ambitious thickness for a boy of six. Into a skull of this thickness and density the saw would penetrate about as quickly as it would into a piece of marble. It is, therefore, practically useless except to outline the work for the other instruments, and, though I have no great liking for the chisel, it will be necessary to use it in this case. As the bone is penetrated, iodoform gauze is stuffed into the wound to exclude septic material and to prevent oozing from the bone.

I have now succeeded in cutting through the entire length of the groove and the horse-shoe shaped trap-door is pried up with a lever. With the closely approximated poles of a faradic battery, I am trying to produce a muscular response to the excitation of the mother centers in the cerebral cortex. Ordinarily this can be done through the dura mater, but in this case there is no response. There is considerable tension of the dura and I shall divide it parallel to the course of the majority of vessels which are visible, so as to avoid hemorrhage as much as possible. I can get no response to the electrical stimulus even when nothing but the pia and arachnoid intervenes. The tension of the brain is very evident from the way in which it protrudes through the opening in the dura. Although the pressure has been relieved over this area, it is hopeless to expect a skull as thick as many an adults' to expand sufficiently to allow the proper development of the entire brain. The antipyrin spray (5 per cent.) is used to control hemorrhage and the dura is closed with fine cat-gut. The lid of bone is laid in place and the scalp wound sutured with cat-gut and dressed antiseptically. It will probably be necessary to keep the child's hands lashed in order to prevent him from tearing off the dressings. The immediate prognosis is favorable, the pulse is better now than it was when the child entered the hospital and there is no reason to anticipate any trouble from the surgical interference. We can hope for a slight mental improvement and even that will be an important gain, but the prognosis, so far as perfect mentality is concerned, is decidedly unfavorable.

COMMUNICATIONS.

THE PRESENT POSITION OF THE HYPODERMIC METHOD IN THE TREATMENT OF SYPHILIS.*

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While the use of hypodermatic injection in syphilis dates back nearly thirty years, the alleged superiority of this method of treatment to all others has been most persistently set forth by its advocates during the last ten years. Their arguments are based primarily upon the shortcomings of the methods of mouth ingestion and inunction, and further upon certain alleged advantages claimed for the hypodermatic method itself.

The specific claims made by those who have been exploiting the method are as follows (Sukhoff, Damman, Elsenberg, Lang, Blazer, Lewin):

1. The practitioner remains "master of the situation" throughout. This is one of the glittering rhetorical generalities indulged in occasionally by our Continental colleagues, which may mean anything or nothing, and to which a definite reply is always difficult. In this instance, under the most limited interpretation possible, it is not warranted by the facts.

2. The drugs needed may be easily obtained in the pure state. This is not peculiar to the hypodermatic method.

3. They may be prepared for use by the physician himself. This, if ever an advantage, is scarcely worth mention.

4. In the use of the soluble salts of mercury a precise dosage is obtainable. It may be safely asserted that the varying degrees of local reaction affecting the rapidity and the thoroughness of absorption do not give rise to as much variation in the dose as do the differences in absorptive power in the skin and the gastro-intestinal mucous membrane.

5. It saves time and labor on the part of both physician and patient, rendering visits more infrequent, etc. This is doubtful, and not very important, if true.

6. It necessitates but little alteration in diet, habits of life, etc. Such alteration, under ordinary methods, is practically only that indicated by the general rules of hygiene, and would be beneficial to most persons, non-syphilitics included.

7. The patient's skin and digestive organs remain unaffected, except in rare instances. This is true, but is offset by the pain, the liability to abscess, and other objections to be described later.

8. Stomatitis is of rare occurrence. This is not correct. The evidence goes to show that with equal care it is more likely to occur during hypodermatic medication, and when it does occur comes on more suddenly and is more intense and uncontrollable than under either of the other methods.

9. It enables the patient to conceal the disease. This may have some little force when the method is compared with the inunction treatment, but is certainly a very minor point in any event.

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* Abstract from Transactions of Philadelphia County Medical Society.

10. It lessens expense. This is likewise of little importance, as the difference is not great.

11. It is more likely to affect an entire and permanent cure, and does so in the shortest time and with the minimum amount of mercury. This is, after all, the most important claim that is made, and if it could be established would warrant the adoption of the method to the exclusion of all others. I am of the opinion, however, that it cannot be substantiated, and at any rate am certain that the time has not yet arrived for a final and judicial decision upon the matter. The evidence is contradictory, and is open to the suspicion of bias upon both sides, but especially and notably upon that of the advocates of hypodermatics.

12. In the presence of grave and imminently threatening visceral troubles it affords the readiest and surest way of producing a powerful influence. This may possibly be admitted, although in the great majority of cases there is ample time for the employment of inunctions.

13. In doubtful cases it shortens the time required for the "therapeutic diagnosis." This is scarcely to be included among the advantages belonging to a system intended for routine treatment. It is especially claimed for the hypodermatic use of calomel, and will be discussed in connection with that drug.

The objections to the method may be more briefly mentioned, as I believe they are all well founded.

1. It is painful, and in many patients excites apprehension, and is strongly objected to. It might be added that the measures advocated to obviate or lessen pain, viz., the precedent or simultaneous administration of morphine or cocaine, are in themselves highly objectionable, and certainly to be discouraged.

2. It is occasionally, though rarely, dangerous, and sometimes rapidly fatal. This is undoubted.

3. It is liable to be followed by certain local complications, which are: (*a*) erythema; (*b*) painful nodosities; (*c*) cellulitis; (*d*) abscess; (*e*) sloughing.

While the percentage of these troubles is small in the reported cases, it must be remembered that the bulk of the enormous mass of literature referring to it which has accumulated during the last decade has been contributed by partisans. This prevents me from being much influenced by figures showing, for example, that "in 36,922 injections in 3185 patients, suppuration occurred in 116, or less than one-third of one per cent." (Damman: *Aust. Med. Jour.*, March 15, 1892).

4. It cannot be properly carried on by the patient, but always requires the intervention of the surgeon. In attempting to review the contributions to this department of syphilology I shall not attempt completeness, both because of lack of space and for the reason that so much that has been written is, if not stale and flat, certainly weary and unprofitable.

The chief subdivisions of the hypodermatic method are based upon the solubility or insolubility of the mercurial preparations which are employed, the leading member of each group being respectively the corrosive chloride and the mild chloride.

The technique of their introduction is practically identical in both classes.

(*a*.) The solution or emulsion used should be sterilized.

(*b*.) The skin of the region selected for the puncture should be cleansed with soap and water, then with alcohol or turpentine, then with a 1 to 20 carbolic solution, and finally with 1 to 1000 sublimate solution. The hands of the operator should be similarly prepared.

(*c*.) The needle, which should be larger and longer than the ordinary hypodermatic needle, and the syringe itself, should be washed in 1 to 20 carbolic solution for at least fifteen minutes before using.

Any form of syringe may be employed, the essentials being that it is capable of complete sterilization, works easily and smoothly, and holds the necessary quantity of fluid. For some of the preparations employed a rubber syringe and a silver or gold needle are of advantage. For many of them the ordinary hypodermatic syringe, with the larger needle, will suffice.

Much has been written about the site of injection and its depth. There seems reason to believe that the local influence of mercury is of great advantage, and the existence of a serious lesion at an accessible locality may occasionally determine the point of injection. Usually, however, the post-trochanteric region has been chosen as one which is not subject to pressure or to the observation of others, and which is not especially sensative. The statement has been made (Taylor, *op. cit.*) that experience shows the thighs to be particularly liable to undergo suppuration, and that they should therefore be avoided. The same advice is given as to the arms and forearms. The only *a priori* reason which occurs to me in explanation is that the constant use and motion of these parts may favor inflammatory changes. They would naturally be selected frequently under ordinary circumstances for hypodermatic medication, and the fact of their special susceptibility to abscess ought to be fully demonstrated before they are excluded from the list of available sites. The regions where the skin is closely applied to bones, those where cellular tissue is scanty and those subjected to pressure in ordinary positions should be carefully avoided, as should those in which suppuration or sloughing would be followed by noticeable disfigurement. As to the depth at which the injection should be deposited, the choice lies between the muscular tissues and the subcutaneous connective tissue. In my judgment the preference should undoubtedly be given the latter, as if abscess occurs it is much more easily managed than if it is subfascial.

The method of throwing in the fluid is identical with that of giving an ordinary hypodermatic injection. A fold of skin should be pinched up and the needle introduced parallel to its long axis and to the required depth. The point of puncture should be covered with the finger of the operator as the needle is withdrawn, and then sealed with a little iodoform in collodion.

All these precautions cannot prevent occasional microbic infection from the deeper layers of the skin, and unless the fluid used happens in itself to be antiseptic, this accident will be followed by cellulitis or abscess.

We may consider the special substances used in the two great groups.

I. THE SOLUBLE SALTS USED HYPODERMATICALLY.

(*a*). Corrosive sublimate.—The dose is from 1/12 to 1/4 of a grain dissolved in about 20 drops of distilled water. It may be given in an average case every second or third day until stomatitis is threatened, and may then be used at longer intervals. If selected on account of some emergency, larger or more frequent doses may be employed.

(*b*). Asparagin: Mercury.—Two and a half drachms of asparagin is dissolved in warm water, and oxide of mercury added to saturation. The solution is filtered after cooling, and the amount of mercury estimated. It is then diluted to make a 1 or 2 per cent. solution of mercury as required.

(*c*). Succinimide of mercury, used in a 5 per cent. aqueous solution in doses of 1/60 to 1/20 of a grain.

(*d*). The oxycyanide has been used by Bœr in 1 gramme (15 grains) injections, containing 1.25 per cent. of the mercurial.

(*e*). Mercuric Albuminate. — An unstable compound of white of egg, sodium chloride and sublimate; of indefinite composition and liable to rapid deterioration.

(*f*). The Iodo-tannate of mercury (Nouny) may be used in the following formula:

℞	Hydrargyri	gr. 1-16
	Iodini	gr. ¼
	Acid. tannic	gr. 3-10
	Glycerine	gtt. xv
M.		

(*g*). Carbolate of mercury has been used by various experimenters in doses of 1/6 to 1/3 grain dissolved in 15 drops of water.

(*h*). The formamide of mercury.

(*i*). Alaninate of mercury.

(*j*). The benzoate of mercury is preferred by Balzar and Thiroloix (*La Méd. Moderne*) who say: "this salt coagulates albumen far less than other combinations of mercury, and hence it exercises a less energetic action upon the cutaneous nerve-filaments. It does not seem to cause gastro-intestinal complications or abscesses, and no case of gingivitis ever went on to marked salivation. The injections may be practiced in any part of the body, but are less painful in the back. The objections to this salt are that many injections are required, that it deteriorates on keeping, and that it sometimes causes induration at the point of application. Cochery (*Thèse de Paris*, 1890) says that the fact that the benzoate does not coagulate albumin is the explanation of its comparative painlessness. He found that this, like other preparations, is not well borne by very stout persons, the presence in the connective tissue spaces of masses of fat preventing the satisfactory diffusion of the remedy. The same observations have been made by others. Brousse, of Montpelier, prefers this salt to all the other soluble preparations.

II.—THE INSOLUBLE SALTS USED HYPODERMATICALLY.

(*a*). Calomel, which may be taken as the type of the insoluble preparations, may be used in the dose of one-half to one grain every four days, two grains weekly, or three grains every ten or twelve days. It may be given in one of the following mixtures:

℞	Hydrarg. chlorid. mit.	gr. ½.
	Glycerinae purificat.	gtt. x.
	Aquæ destillat.	gtt. x.
M.		

℞	Hydrarg. chlorid. mit.	gr. j.
	Mucilag. acaciae	gtt. xx.
M.		

℞	Hydrarg. chlorid mit. Sodii chloridi	āā gr. j.
	Aquae destillat.	gtt. xxx.
M.		

The calomel used should be sublimated by steam and perfectly sterile.

The method in use by Besnier at the Hôpital Saint Louis may be taken as the type, and is, therefore, given in detail: The formula used is calomel, 1 part, oil of vaseline, 20 parts. The calomel is incorporated with the petro-vaseline and well shaken, to put the insoluble substance in as perfect suspension as possible, and the mixture is then boiled a few seconds before making the injection, in order to sterilize it. The operator should wash the hands in a mixture of alcohol and liquor of Van Swieten, and cleanse the part where the injection is to be made with some absorbent cotton wet with the same solution. The needle of the syringe should be cleansed. The choice of location for making the injection is a point of the buttocks, about three centimeters below the crest of the ilium and an equal distance above and to the inner side of the great trochanter. The mass of muscles in this region are favorable for the injection, and they do not support the weight of the body in sitting. The skin is displaced somewhat, so that there is no direct continuation of the puncture of the integument and that of the deeper tissues. The insertion of the needle is done quickly at one stroke down to the guard. By operating in this way the patient scarcely feels its introduction. The injection is then made gently, but a certain force must be employed to secure a passage of the emulsion into the tissues.

The employment of calomel subcutaneously was originally advocated by Scarenzio in 1864, but was not very extensively used, except in Italy and Germany until the writings of Smirnoff in 1883 and 1886 called renewed attention to it.

During the interval, Sigmund was the most prominent syphilographer who carefully investigated the claims which were made for it, reaching the conclusion that we cannot hope to "cure" syphilis by a few injections of this or any other salt of mercury. Since then it has been used very largely, and its limits of usefulness as well as its dangers are now fairly well understood.

We may consider the latter first.

Locally, there is almost always pain of greater or less severity.

There is almost always an inflammatory reaction, which, when slightly developed, causes merely a flush around the needle puncture,and a feeling of heat or itching. Lasser has reported a case of extensive mercurial erythema. Oftener there is an exudation of lymph with the formation of a hard, horny nodule, moderately tender to the touch and very painful if subjected to continuous pressure. This is usually absorbed if asepsis has been good, but in a certain proportion of cases goes on to softening, to suppuration and to the formation of an abscess. It rarely or never disappears under two weeks, often persists for a longer time, as has been shown by Balzer at autopsies, and its disintegration is sometimes attended with extensive sloughing and cellulitis.

Constitutionally, calomel injections have produced the following unfavorable results. Stomatitis, in spite of the assertions to the contrary, has not been infrequent, is often very persistent, and is sometimes of a very grave variety, attended with all the more dangerous phenomena of ptyalism. It is the more serious, as it comes on suddenly (fulminating type), and is very rebellious to ordinary treatment. This intractability is probably due to the continuous absorption going on from the point of deposit of the drug, and has in more than one instance neccessitated the excision of the indurated tissue thereabouts (Volger has reported three such cases), and the cauterization of the walls of the resulting wound. Gastro-enteritis and colitis have occurred (Besnier) and have even been fatal (Kraus), and two cases of pneumonia following a calomel and oil injection have been reported (Klotz), and were presumably due to oil embolism.

On the other hand, the influence of the drug thus used upon the symptoms of syphilis in the secondary stage, and its occasional value as an adjuvant to the iodides in the treatment of later phenomena when grave or dangerous, have been abundantly demonstrated. The most striking results have been obtained in specific eye troubles, but various forms of visual and connective tissue lesions have been reported as rapidly cured by its use.

There can be no reason to doubt its efficacy (if properly administered) during the secondary stage of syphilis. Mercurialization, however produced, is then at its acme of usefulness. There is much more reason to question the reported benefits in all forms of tertiary syphilis. It is contrary to the accumulated experience of the profession to find, in late syphilis, that gummata, periosteal nodes, osteitis, tubercular syphilides and other phenomena of similar character yield promptly to the use of mercury alone. It is undoubtedly of value then as an adjuvant to or in conjunction with the iodides, but on both theoretical and clinical grounds cannot be expected to supersede them.

Smirnoff's reported cases require confirmation. Taylor acutely says: "Smirnoff significantly remarks that if, during a course of injections in tertiary syphilis, aggravation of the symptoms occurs, they should be stopped at once and the iodide of potassium should be substituted."

One possible advantage of calomel may be properly mentioned here. Jullien (*Le Bulletin Medical*, June 19, 1892), calls attention to its diagnostic value in doubtful surgical cases: He says: "The propriety of operating in certain cases is, in the experience of every surgeon, counteracted by uncertainty of diagnosis; an ulceration, a tumor of ambiguous identity, makes one suspect cancer, without casting aside all waverings toward the side of syphilis. The surgeon should, in such a case, institute a course of treatment to throw light as rapidly as possible on the obscure points. Under these conditions, Jullien says he cannot too vehemently proclaim the superiority of calomel injections used according to the Scarenzio-Smirnoff method: $\frac{1}{12}$ grain (0.097 gramme) of calomel suspended in 15 grains (0.97 gramme) of liquid vaselin, thoroughly sterilized, and injected once into the gluteal muscles under aseptic conditions. He says no one can deny the profound modification which it exercises upon a syphilitic neoplasm, no matter what has been its duration. In five cases which he cites he determined whether a tumor was a manifestation of syphilis or not, in short, whether or not operation was indicated. He adds:

"Calomel by injection presents, in the highest degree, the qualifications of a test-medicine." He thinks that no argument can be brought up in opposition; and that if the surgeon does not utilize this method, "it is not—it cannot be—that he condemns it, but that he is ignorant of it." It may be discarded in the methodic, prolonged treatment of syphilis; but all its inconveniences are obliterated by two indubitable facts in the presence of doubts concerning a malignant degeneration, where "delays are dangerous." These two facts are: "1. That a therapeutic diagnosis of syphilis is clearly defined in eight days by injection of calomel. 2. In case of negative results, this treatment has not impeded the necessary operation in the slightest degree, and does not in the least complicate its results." However, even Jullien says that it must not be used blindly, and that it is best not to employ it in cases of marked albuminuria. If further experience confirms these observations, it will be one of the best practical results following the excessive (and unnecessary) use of hypodermatic treatment which has been the fashion for some years on certain parts of the Continent.

(*b*.) Metallic Mercury. The dose employed has been from 5 to 20 or 30 grains once weekly, followed by kneading and rubbing of the region.

(*c*.) Gray Oil (*Oleum cinerium*) is a form of metallic mercury which has been much more widely used. It is prepared by making an ointment or pomade of mercury with lanoline as a basis, and then diluting this with almond or olive oil (Lang), or by triturating metallic mercury with etheral tincture of benzoin and oil of vaseline (Neisser), or by combining with the mercury and lanoline a two per cent. carbolized olive oil (Althaus).

(*d*). The yellow Oxide of Mercury. Taylor says that this salt is to-day the most generally used hypodermatically of all the mercurial compounds, having largely replaced calomel. The evidence as to their comparative value is not so conflicting as usual. The drug was introduced by Watrasewski, who gave up calomel on account of the pain and unpleasant symptoms which it produces. His formula is :

℞ Hydrarg. oxid. flav.................... gr. xv
Acaciae.............................. gr. iv
Aquae destillat....................... f℥i.—M.

He uses a Pravaz syringeful, and says that three to six injections suffice for a "cure," which Taylor says, "it must always be remembered, means, in the minds of most exploiters of hypodermatic mercurial preparations in syphilis, the disappearance of a given set of symptoms or lesions." The following remarks of Taylor throw such a strong side light on this whole question of the hyodermatic treatment of syphilis that I quote them fully : "Tchernoguboff uses this preparation in doses of 2 grains every ten or eleven days, injected into the muscles. He says that syphilitic children from 12 to 14 years old tolerate one-grain doses hypodermatically very well, and are benefited. He treated 120 cases, male, and female, young and old, without any untoward complications. It is interesting to remember that Lesser observed abdominal pains, vomiting, and bloody and mucoid diarrhœa after injections of yellow oxide, and never after calomel. The conclusion, therefore, is warranted that we can only get at the truth as regards the advantages and drawbacks peculiar to any and all preparations by the study of the experience of many men. It is never well to rely fully upon the assertions of the exploiter of a new mercurial preparation or combination. Thus we find that Dampekoff used the yellow oxide upon 179 syphilitic women, and that "neither intense pain nor suppuration was produced." Yet these women absolutely refused to allow the continuation of the treatment by reason of the severity of the pain. Then, on the other hand, Reshetnikoff, in the course of 1800 injections of yellow oxide, suspended in vaseline oil, made into the gluteal regions, never met with an instance of local suppuration, and only once saw a diffuse sanguinolent infiltration, which disappeared without any bad result."

(*e*). The neutral salicylate of mercury.

(*f*). Thymolate of mercury.

(*g*.) The black oxide, protiodide, red oxide, tannate, sulphate, turpeth mineral and cinnabar have all been used.

This does not begin to complete the formidable list of therapeutic suggestions that have been made, and, unfortunately for the patient, acted upon during the last few years.

The positive objections to it I have already sufficiently considered. Marked pain, sensitive nodosities, cellulitis, sloughing and abscess, liability to disfiguring and permanent cicatrices, to a sudden and grave type of stomatitis, to violent entero-colitis, to pseudo-paralyses, albuminuria, pulmonary embolism, etc., even if they occur in but a small percentage of cases, make up a sufficiently formidable list of possible accidents to warrant a reasonable hesitation before giving up older and well-tried methods, practically free from danger, in favor of this one.

The objections to it by the patients themselves are a serious obstacle, in this country at least, to the practical success of the method. Even our hospital and dispensary cases are a much more independent class than the same sort of people abroad, and cannot be subjected to wholesale experimentation with the same impunity. In Paris, Fournier has called attention to the fact that syphilitics flocked from the hospitals where this method was being tried to his service. In private practice here it would certainly be difficult of adoption, and while it might be attended by the rapid disappearance of symptoms, there would often be an equally rapid disappearance of patients.

The figures which are gradually accumulating, tend already to show that its employment, according to current formulæ, brings with it another danger, viz., that involved in the encouragement of insufficient treatment, in the dependence upon the short and heroic courses, which, as Hutchinson says, are often followed by the gravest and most serious tertiary phenomena.

The claim that by a few injections the time of treatment can be measured in months, or even in weeks, instead of years, would seem, as Mauriac has said, to involve the idea that mercury given hypodermatically acquires some new and powerful curative property which, given in other ways, it does not possess. As a matter of fact, when we inject the insoluble salts, we are merely leaving the chemistry of their transformation into the soluble compounds to the tissues themselves; when we inject the soluble salts we are simply reaching the general circulation by a somewhat more direct method than when we approach it through the capillaries and absorbents of the skin or the gastro-intestinal tract.

I believe that, on the whole, while the final outcome of the experiences of the last few years will doubtless be for the advantage of science and the extension of our therapeutic methods, the information thus acquired will be at the expense of many patients who will suffer from the direct consequences of the method itself or succumb to the ultimate development of insufficiently treated syphilis.

In England, Hutchinson, who is, *facile princeps*, the leader of British syphilographers (and who, in my opinion, is, with the possible exception of Fournier, the leading syphilograper of the world) says: "Hypodermatic injection has come but little into employment in English practice, nor does it appear to increase in favor with those Continental surgeons who at one time thought highest of it."

In this country Taylor, so far as I know, voices the prevailing sentiment among specialists in this branch when he says: "The extent of the literature of hypodermatic injections in syphilis contributed within the past ten or twelve years is simply appalling, and there is really very little which is of practical value. It will be seen that almost every preparation of mercury has been experimented with in the hypodermatic injection treatment, and that the chemist's art has been sorely taxed to produce new preparations. Each new preparation has been exploited as the ideal of perfection, and in most cases a hearty welcome has been accorded it, so that a witty German reviewer has made the following paraphrase of an old maxim applicable to the subject: 'De novis nil nisi bonum.'"

As to the injection of insoluble preparations, he says he has no leaning toward its employment, and that he is firmly convinced that it will never be used as a systematic treatment extending over a period of years. He adds: "It is a treatment which is generally irksome and repulsive to patients, always attended with more or less discomfort and pain, and often producing destructive subcutaneous lesions over the body, which cause mental and physical suffering, and which of necessity must impair the patient's health and strength. In some cases we have seen, it has been known to imperil and to destroy life."

The soluble preparations he uses, as do most of us under various limitations.

In the light of the evidence presented above, it seems to me safe to assert that: The hypodermatic treatment of syphilis has not as yet shown results which warrant its adoption as a routine method to the exclusion of or in reference to other methods, but, on the contrary, has some apparently insuperable disadvantages and even dangers which render it improbable that it ever will be so adopted.

2. The circumstances under which hypodermatic medication should be employed may be summarized as follows: *a.* Those cases in which other methods of treatment have been tried and failed. *b.* Those cases in which, owing to idiosyncrasy or intercurrent disease, the skin and the digestive tract cannot be used for the introduction of mercury. *c.* Those cases in which, owing to grave and advancing lesions, rapid mercurialization is absolutely necessary. *d.* Those cases in which obstinate localized lesions can be most directly reached by this plan. *e.* Possibly those cases in which early differentiation between syphilis and malignant disease, or tubercular ulceration, is extremely important, should be included in this list. I certainly feel inclined to employ the method in all doubtful cases which admit of it, particularly in those conditions of the tongue which often leave the surgeon for a considerable time in doubt as to their exact nature. Anything which promises to shorten this period of doubt by rendering the therapeutic test more rapid and more certain would be of great advantage. I should, however, in such instances feel obliged to use potassium iodide by the mouth at the same time. *f.* A theoretical possibility of the employment of mercury hypodermatically has suggested itself to me, but I have not as yet actually employed it. It may be that its use by this method will aid in shortening the period of doubt which often intervenes between the appearance of the primary sore and

the development of general adenopathy or of the exanthemata. If, in the presence of a sore of uncertain character, the employment of mercury hypodermatically resulted in rapid cicatrization, no local treatment being employed other than cleanliness, it might occasionally throw light upon the case without being open to all the objections which attend the systematic and slower administration of mercury by the mouth. It is possible that the idea is worth a trial in exceptional cases, but I do not think it should be adopted as a routine practice.

3. As to the choice between the two great classes of mercurials, the soluble salts are to be preferred to the insoluble in the large majority of cases, as more exact in the matter of dosage and much less dangerous and less likely to be followed by local disturbances. They are always to be used when there is need for rapid mercurialization.

The insoluble salts should probably be reserved for those cases in which frequent visits to the surgeon are impossible and in which no contra-indications exist. In cases of defective kidneys, diabetes, profound anæmia, marked atheroma, great debility, etc., such methods are dangerous, and the case, even if urgent, will probably do better under some other form of treatment.

4. Finally, as to the special preparation to be employed: Among the soluble salts the bichloride is probably to be preferred. The results from its use are not strikingly different from those obtained from the other compounds of this class, but its stability and great solubility and its germicidal qualities seem to warrant its selection. The disadvantage is the pain which it causes, but the evidence in this direction shows that in the hands of impartial investigators, not responsible for the introduction of the particular substance employed, each of the salts on the list produces a considerable amount of pain and a not inconsiderable number of accidents or complications. Probably the bichloride is freer from objectionable features, in respect especially to the production of suppuration, than any of the salts of mercury.

Among the insoluble salts calomel and the yellow oxide are to be preferred. It would appear that the latter is a little less active, but at the same time much less irritating. Gray oil is the most available form of administering metallic mercury.

A COMPOUND DISLOCATION OF THE LEFT ANKLE, AND FRACTURE OF THE INTERNAL MALLEOLUS—ASTRAGALUS AND INTERNAL MALLEOUS EXCISED.

CHARLES B. WILLIAMS,* A. B., M. D., PHILADELPHIA.

F. M., aet. 43; white; married; was admitted to the Pennsylvania Hospital on the afternoon of June 29, 1892, suffering with a compound dislocation of his left internal malleolus, the result of a fall from the third story of a building which he was painting. There was a large lacerated wound over the external malleolus (or the place where it is normaly situated,—for in this man the external malleolus, as well as the fourth toe with its accompanying metatarsal bone were congenitally absent) through which wound protruded a portion of the articulating surface of the astragalus. The foot was warm and the arteries intact. The patient was considerably shocked upon admission, temperature 99°, pulse soft and compressible. He was given hypodermics of strychninæ sulph. gr. 1-40 with tr. digitalis m. x. before the operation, as well as several hypodermics of ether and one of atropiæ sulph. gr. 1-120 during the operation.

Operation. The patient was etherized, the wound slightly enlarged, and the astragalus severed from its attachments by means of a probe pointed knife, and then excised. In like manner, the internal malleolus was also removed. The articulating surface of the tibia was next sawed of. As the anterior and posterior tibial arteries were uninjured, only a few small veins required ligation. After a rubber drainage tube had been inserted in the wound, its edges were united by means of silver wire sutures. The limb was dressed antiseptically and placed in a fracture box.

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The patient was now ordered ammon. carb. gr. v. every ½ hour, whiskey drs. ij. hourly, and tr. digitalis gtt. v. every four hours, the frequency of the doses to be diminished as soon as the patient reacted.

At 9 P. M. there was considerable oozing through the dressings which necessitated their being reinforced with bichloride cotton.

June 30, 1892. Oozing from the wound has ceased. Limb is in good position. Patient complains of his back hurting him, for which warm leadwater and laudanum was ordered. Has no pain in his ankle.

July 3, 1892. Limb dressed to-day. The edges of the wound appear to be well approximated. No discharge through the drainage tube, which was now shortened a little.

July 13, 1892. Dressed yesterday. All of the silver sutures were removed. There was but little discharge. The tube was further shortened and the limb dressed as before. The position of the foot and ankle is excellent.

August 13, 1892. The fracture-box dressing was discontinued to-day. There is scarcely any discharge from the wound now. There seems to be some slight motion in the ankle-joint. In place of the fracture-box two lateral splints of Russian felt, moulded accurately to fit the limb, were applied with a small antiseptic dressing, and the patient allowed to be up and about in a wheeled chair.

August 16, 1892. Wound is entirely healed. The patient walks quite well with the aid of crutches.

August 17, 1892. The patient went out on a pass to-day and eloped.

September 7, 1892. The patient came back to the hospital to-day. He still uses crutches. There is some slight motion in the ankle-joint. The wound has entirely healed. The shortening amounts to about 2½ inches and the patient walks on the ball of his foot with the heel elevated. Ordered to procure a shoe with a "built-up" sole.

The patient walked into the hospital about four months ago. He had abandoned crutches and was wearing a shoe with only the heel "built up." Consequently he experienced considerable discomfort in walking and his ankle tired very easily. There was considerable motian to be observed in the ankle now. The patient was ordered to have the sole of the shoe, as well as the heel, built up for 2½ inches and then to return and report to the hospital. This last request he has never obeyed.

Aristol in Hemorrhoids.

To establish a radical cure, all causes to be ascribed to a faulty diet strong drinks or want of exercise must first be removed, says Dr. Engle (*Med. Summ*). Then every morning and night, and in severe cases every three or four hours, about one ounce of cold water is injected into the rectum and allowed to remain as long as possible. Morning and night the following suppository is applied:

℞

Extracti opii	grs. iij
Extracti belladonnae	gr. j
Quiniae muriat.,	grs. xxvj
Aristol	ʒj
Olei theobrom.,	
Cerae albae	āā q. s.

M. Et fiant suppositoria No. vi.

Sig.—One, morning and night.

Immediately after each movement of the bowels the following salve spread over the point of the index finger is pushed up into the rectum for about one and a half inches, and some upward pressure is exerted by the external sphincter.

℞

Unguent zinci benzoat	℥j
Balsam Peruvian	ʒj
Aristol	grs. xxx

M. Ft. Ungt.

Sig.—Externally.

While, internally from one to two heaped teaspoonfuls, in plenty of water, are taken two or three times daily of the following powder:

℞

Sulphur. flor.,	
Potass. bitartrat,,	āā ℥j

Mt. Ft. pulvis.

—*Medical Review.*

FOR PAIN IN THE EAR from inflammation, Dr. John Dunn (quoted in *La Semaine Medicale*) recommends the following:

℞

Menthol pulv..	
Camphor. pulv.,	āā gr. xx
Vaseline liquid	f℥j

M.

Sig.—Instill a few drops into the ears several times a day.

For Vomiting after Etherization.

Prof. Hare (*Coll. and Clin. Record*) recommends the following:

℞

Tincturæ opii deodoratæ	gtts. xxx
Sodii bromidi	grs. xxx
Aquæ amyli	℥ij or iij

M. Sig.—As an enema.

SOCIETY REPORTS.

THE MEDICO-CHIRURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting April 14, 1893.

THE PRESIDENT, Dr. F. C. Simpson, in the Chair.

STENOSIS OF THE ŒSOPHAGUS.

DR. F. C. WILSON: This specimen is from a patient, male, aged about fifty-seven years, who had always been perfectly healthy, that is he had never been under a physician's charge, although never robust in appearance. He commenced having some difficulty in swallowing which gradually increased to such extent that he became uneasy about it, and he began at the same time to vomit. He never had any very severe pain of any sort; gave no history of having swallowed any poison or corrosive substance, and was of course at a loss to account for the trouble. When I saw him, I found that he was able to swallow liquids, but in an irregular way. Sometimes he would be able to swallow then for a day or two, at other times for some days he would hardly be able to get anything down. When anything would pass down, after a while a good deal of it would be regurgitated. He gradually grew worse until he was considerably emaciated. I questioned him concerning his symptoms, as to the possible inheritance of cancerous trouble, as to his having swallowed any substance like a piece of bone, or any corrosive material, but found that he gave no history of anything of that nature. I could locate by auscultation some obstruction during the act of swallowing near the lower end of the œsophagus; I could hear it distinctly as he would swallow while I listened over the course of the œsophagus. I suggested to him that I explore the œsophagus, at the same time pass any obstruction that might be there by means of the bougie or feeding tube. During auscultation I listened carefully for evidence of aneurism or bruit thinking there might possibly be some obstruction due to that, but nothing of the sort could be heard. The patient complained of no pain such as we usually find in aneurism occurring in proximity to the vertebral column; we know that gives rise to severe boring pain due to breaking down of these vertebræ by impact of the developing tumor. Nothing of the kind could be elicited in the history and there was no evidence of any aneurismal enlargement.

I made an engagement with him and visited him for the purpose of introducing a tube. He was a very timid and nervous man and I had some difficulty in passing the tube, but I could distinctly recognize the obstruction when that point was reached. I succeeded in passing an ordinary rubber feeding tube and poured through it a fairly good meal of milk and after that for several days he was able to swallow with a great deal more ease. I made another engagement with him for several days later, but before the time was reached he sent word that he was swallowing so much better he believed he would postpone it. I saw no more of him, and six months afterwards I saw notice of his death. He passed into the hands of some Homœopathic physician; he grew gradually worse and more emaciated, and finally death occured from exhaustion. I was called to make a post mortem in the case. I made the autopsy and secured this specimen which I present here to-night with the idea of getting the opinion of the society as to the nature of the enlargement. No microscopical examination has been made thus far. In making the post morten examination I opened the chest and found no trouble to account for death until I reached the œsophagus. I removed the entire mass, œsophagus and stomach, and in slitting open the œsophagus I found near the lower extremity some excrescence-like growths which involved the lower portion of the œsophagus and extended through the cardiac orifice into the stomach. This enlargement or growth looked very much like an excrescence, not nodulated and not hard. The stomach was very much contracted. There was no involvement of the neighboring organs, of the liver or spleen. I believe Dr. Coomes saw the case a number of times and passed the bougie, but what his opinion was as to the nature of the trouble, I am unable to say. One Homœopathic physician who saw the patient, I think, made diagonsis of aneurismal enlargement of the aorta. Nothing except a careful microscopical examination can clear up the exact nature of the case

DISCUSSION.

Dr. J. A. Larrabee: I have had quite a number of cases of stricture of the œsophagus, eight or ten probably, covering my experience in practice. I have one now that I would like to turn over to the Homœopaths. I think this is a capital idea. The patient referred to came to my office about two weeks ago; I started in by passing an Oliver bougie, smallest size. After three dilatations in that way I passed the larger one, which is the largest size of four bougies in the set manufactured by Oliver. I told him I thought that amount of dilatation would give him some relief and fully expected it to do so, whether it was temporary or otherwise, but contrary to my expectations, he reported that it was no better an hour afterward so far as swallowing was concerned than it was an hour before. I scraped some of the material from the tube after withdrawal and handed it to Dr. Vissman for examination. This patient is not emaciated and presents a very fair appearance. There is no cancerous cachexia, neither has he a cancerous history. Now I believe this man is going the way of the other case of stricture of the œsaphagus reported, but just what the nature of the stricture is, I do not know. The case has only been under my observation for two weeks, and he has been unable to swallow anything except fluids. Auscultation locates the obstruction about midway of the œsophagus, you can hear it "chuck" there just as plainly as you could a bucket, then the fluid slowly trickles down.

Dr. A. M. Cartledge: It seems to me in cases of this character the first thing to establish is "stricture of the œsophagus" after that fact has once been established usually there is but little difficulty in determining the nature. Certainly there should be very little trouble after death has taken place. It seems to me differentiation should be very easy. True stenosis of the œsophagus is cicatrical or malignant. Cicatrical stenosis is the result of syphilitic ulceration, more rarely tuberculous and very commonly the result of trauma.

In the case reported by Dr. Wilson, without a microscopical examination I do not think anyone should pass a judgment, but my opinion is that it is clearly malignant disease. It is not sypilitic, it is not tuberculous, and I take it from the size of the deposit and the macroscopical appearance that it is carcinoma, and believe that the microscope will prove it.

Dr. J. A. Larrabee: Would it be possible if it were carcinoma without any ulcerative stage set up, to have told from the secretions whether it was cancer or not?

Dr. Wm. Vissman (Visiting): I do not think there is any possible way of telling whether it is cancerous or tuberculous, or anything else, unless you get a particle of the tumor, and you could not get this without there was a breaking down.

Concerning the specimen exhibited by Dr. Wilson: From a macroscopical examination I think there is no doubt about its being a carcinoma. One peculiarity about the tumor is that we cannot discover the exact line of the stomach, that is where the stomach has been taken off. Another peculiarity is that carcinoma of the œsophagus very seldom or never, we might say, extends into the stomach. It may be that the microscope will show that this is nothing more nor less than a carcinoma of the œsophagus.

Dr. F. C. Wilson: I had mapped out a plan of management of the case which possibly may have had something to do with scaring him off. I had spoken either to the patient himself or a friend of the advisability of feeding him in the way that I had attempted to do, and if that failed then of putting a tube into the stomach from the outside so that he might be fed in that way. Of course, if the tumor proves to be malignant in character, it would eventually have caused death, but I believe his life might have been prolonged by the insertion of a tube into the stomach. He was greatly emaciated, and certainly died from sheer exhaustion. Had the tube been inserted in the stomach from the outside, his life might have been prolonged possibly several months at least.

Note: A subsequent microscopical examination of the specimen by Dr. Vissman clearly proves the trouble to have been of a cancerous nature.

Cornelius Skinner, M.D., then read a paper on

CONSTIPATION.

Of all minor troubles to which the attention of the practitioner is called, I am persuaded that constipation is the most common and, I am equally bold to say, the most intractable in its cure. It is my purpose in this short paper not to treat of constipation in all of its forms, but to take up that one in which constipation seems to be the disease and not the symptom. Stricture, fissure, hemorrhoids, spinal lesions, tumors, etc., will not be spoken of, but rather that form in which we find tardy and difficult defecation, with hard, scibalous stools. We will not use the time in rehashing the symptoms and effects in general, but go direct to the form in question.

A large majority of these patients we find among the women, and most usually from 15 to 30 years of age. The usual chain of symptoms are given and, on casual questioning, we find that they have had time for and paid more attention to everything else in life than to the bowels. They are punctilious in all engagements, regular at meals, etc., but not at stools. The most trivial affairs, social and otherwise, causing a postponement of one of the most important calls of nature to a more convenient season, which is usually the next day. Again, we find not all typewriters, teachers, etc., or people who lead a sedentary life, but just as often floor-walkers, postmen, or those who take a good deal of exercise, with good digestions and appetites sufficient. One thing is noticed in, I might say, all of this class, and I consider it the prime cause of all trouble, viz: These people do not drink a sufficient quantity in twenty-four hours for nature's demands. They are noticeably small drinkers, and never take water unless prompted by thirst or at meals, and then will drink to excess. The majority of people in general drink too much while eating, thus diluting the juices of digestion to a degree which will eventually impair digestion. It is not easy for us to realize the amount of water thrown off by a healthy man or woman in twenty-four hours:

By the kidneys we lose	42 ounces.
By the lungs we lose	23 ounces.
By the skin we lose	15 ounces.

Now contrast this with the amount taken in during the same time, and we find little enough left for the bowels under most favorable conditions, and when we lessen this by one-fourth or one-half, we find nothing left to keep the stools soft and in the proper condition to be, by peristalsis, packed down into the sigmoid, ready for prompt and easy expulsion.

Constipation may be called the machine of "perpetual motion;" for, when once started, it perpetuates itself until checked by proper causes. Now I admit that we must find the cause for all things, and then remove that cause in order to effect a cure; and, in this very common form just spoken of, to relieve it, we have simply to furnish that deficiency of water in the proper way, and the cure is effected.

It is my custom not to employ any of the waters now sold for constipation; first, because they will not cure, but establish in the bowel that habit which we want to avoid, of waiting to be driven into action by laxatives; secondly, they are expensive.

As I have said before, this water should not be taken at meals, nor too close to the meal hour, but long enough before in order that it may have time by absorption and otherwise to pass out of the stomach into the circulation and bowels below. I have the patients to drink an ordinary tumbler full of cold water thirty minutes before breakfast, dinner and supper, and to take the fourth at retiring, giving sixteen ounces or one pint in addition to that taken at meals as coffee, milk or tea, and during the day when thirsty. Except in very obstinate cases this simple remedy gives me most gratifying results. In those intractable cases I generally use a little pill of aloes, belladonna, strychnia and podophyllin each night or less frequently during the week as the exigencies of the case require. There will be failures on the part of the water and much disappointment to a few patients who put their trust in this remedy, but if this plan is followed systematically in from two to six weeks we will get good results. As an apparent exception I wish to mention a case of constipation that has given me no little concern in the past three weeks.

Patient a tall, slender woman, raised in the country, of good health and family history; age thirty-nine years; married about two years; baby five months old. This woman first consulted me in the beginning of gestation for nausea and a small tumor in the left groin just about the site of inguinal hernia. No positive diagnosis of tumor was made, but I assured her that it would play no part in her confinement, and advised leaving it alone, there being no pain or other symptoms to attract attention. Constipation was quite a factor during gestation, and remained so afterwards, but was tolerably well controlled by the water treatment with the addition of a small glass of Hunyadi water before breakfast. On the night of March 21st I was called and found her suffering intense pain just over the symphysis and tumor mentioned; pain did not intermit but was continuous; tumor very sensitive to touch, almost constant nausea. My first impression was strangulated hernia; bowels had moved in the morning after the water was taken; pain began at five P. M. and this was eleven P. M.. Usual domestic remedies had no effect; pulse 95°; temperature 98½° F. After watching the pain for an hour and still hesitating between strangulated hernia and colic, and realizing the importance of a positive dicision, I called Dr. Rodman in consultation. The Doctor meeting me in one hour, pain in the meantime had shifted into the epigastric region and had become much less.. This changed the aspect somewhat, and we both concurred in its not being strangulation but colic. We concluded our visit at three A. M., but left a hypodermatic of morphia and atropia to be given by the husband if the pain grew worse. I saw the patient next morning at nine o'clock. She was comfortable, but much nauseated; pulse 75, temperature 98½° F. Nausea lasted all day and following night. On the morning of the 23d still great nausea; pulse 100, temperature normal; hot water ordered, which controlled nausea. Met Dr. Rodman on the street, and we agreed to give calomel in one-grain doses until bowels were moved or six grains had been taken. At 2 P. M., pulse 110, temperature normal; patient very restless and slightly flighty; calomel was begun. Dr. Rodman saw her with me at 10.30 P. M. Pulse 120, temperature normal; restlessness increased, with very marked flightiness; no move from bowels. We now believed that there was some internal obstruction, and so expressed ourselves to the husband and, at the same time decided to open the abdomen in the early morning if there was no change for the better. This he very positively sat upon, because her mother, living in the country, was not here to counsel. However, we felt that all responsibility had been assumed by the husband.

Expecting to find the patient worse by morning, we left; but with the determination of going back early and prepared to operate at once. Drs. Mathews, Cecil and Bullock were asked to meet us; we met at eight A.M. 24th, to find pulse 100, a drop of 20, temperature 98½° F., no restlessness, and patient much better. Since the mother could not reach the city before seven P. M., we all decided to wait. Patient held her own until the 30th, when nausea again appeared with pulse 120 and temperature 99½° F. Calomel was given in doses of one grain every hour for six hours but with no effect. On the afternoon of the first instant, castor oil in capsules one drachm each, was given every two hours to be kept up until bowels moved, or eight were given; after twelve hours bowels moved copiously and thus ended to us a most puzzling case.

I will say that frequent colon irrigations were made by myself, with and without glycerine.

The point I want to make in the paper is, in this class of cases where we find no especial reason for the constipation, water given in the manner as described will result in a cure in most of them. The results of this treatment in my practice have been most gratifying.

DISCUSSION.

Dr. J. A. Larrabee: I do not think a paper as interesting and instructive as the one presented by Dr. Skinner ought to go without remarks. I will say that when I received notification of this meeting and saw the name "Constipation" as the subject of the essay, I felt "bound" to come. The importance of what Dr. Skinner has said in regard to a "minor" condition becomes in the mind of every practitioner a "major" condition. The importance attached to the movements of the bowels may be best estimated by the love of people for cathartics. All a man has to do to make his fortune is to get up a cathartic pill or a powder for the same purpose. The desire of the community to be purged amounts almost to insanity. I do not suppose there is a board fence this side of Bullitt County that has not painted upon it something for regulating the bowels. There is not a peak in the Rocky Mountains so high that somebody has not climbed up to put Vinegar Bitters or Carter's Liver Pills on it, so you can judge somewhat of the importance attached to purgative medicines. Regulating the system and keeping the bowels in a soluble condition cannot be over-estimated, and I am one of those who believe in the poisonous effects of retained material in the bowels; if we have a disease called "Uremia" from retention of the urine, I do not see why we cannot have diseases dependent upon "stercoræmia." Many people may have died from causes produced entirely by constipation.

There is one point which has struck me all along while engaged in the practice of medicine, and that is the success of Quacks who use nothing else than aloin purificata in the treatment of chronic diseases. You can take it for granted that when a man starts out with patent medicines, medicines which he himself has patented and advertises for the cure of chronic diseases, that he is giving aloetic purgatives, and another fact that is not sufficiently weighed by physicians in debarring the Quack is that he succeeds in relieving many of these chronic cases. Any old chronic case of anything, I do not care what it is, whether rheumatism, gout or whatever it may be, is more or less relieved by a severe purging. That is where the Quacks get in their work, they help every case of that nature, old patients, men who have been drinking a good deal. I know of half a dozen cases here where old chronic cases of mine have brought medicines from men who were selling them along the street, the vilest compound ever put up, a decoction of aloes and horse aloes at that, and every one of them were relieved, and relieved for quite a while. I speak of this, gentlemen, just to call attention again to these forgotten facts of our law, where we fail in the course of treatment to secure free daily alvine dejections. We can administer a tonic, we can administer iron, tonics for anæmia, spanæmia or hydræmia and the iron does very little good; we do not get the reddened blood corpuscles, nor do we get the characteristic effects of the iron. In this particular the iron waters do more good than our iron simply because they combine purgative salts with the iron. It was the custom of the old school to purge, to vomit, and to bleed; this was the circle of therapeutics around which they moved, and certainly they were on the right track so far as purgation, dieting, etc. were concerned. I think we are forgetting a great deal of the dietary system, and our patients would probably be better off if the old regime were adhered to a little more closely. For instance, I see every day cathartics ordered, of different kinds, chologogues, etc., and the patient allowed to eat what he pleases; the old style was to make corn meal gruel, or oat meal gruel and while the patient was being purged he had to take this kind of a diet. Nothing has been said about the idea that constipation is dependent upon the rapid absorption of water from the intestinal tract. The rectum is a drying machine if it is anything, and so situated as to prevent our becoming nuisances to ourselves, taking up the water from the rectum and drying the feces in the proper shape. Now those people who are constipated have very rapid absorption of water, unless you force large quantities upon them, which means certain cure; it need not be water laden with medicinal elements, simply water (being sure that it is fresh) and use it "on account of its being water," preventing this rapid absorption and allow the feces to be liquid.

The case reported by Dr. Skinner is an exceedingly instructive one,and one which comes up every now and then in practice. The Doctor has said very properly that it is a most puzzling case to present. For some reason we always think the worst about our patients; we are apt to think of appendicitis, then of colic, then of intussusception, etc.; and in this case there seems to have been about this line of symptoms. Yet it was evidently a case of torpidity of the bowels, with no great accumulation of fecal matter.

Referring to Dr. Skinner's statement that many of these cases take sufficient exercise. This is not in accord with my observations of chronic constipation. I believe that the cæcum is so constructed, whether it is the design of nature to do this or not, that walking exercise has an effect like rubbing the cæcum,on account of the muscles which pass behind it. The cæcum is moved when a person is walking, which is not the case by any other means, except possibly riding a bicycle; and this point I understand is to be brought out later in this society, as a committee has been appointed to make some investigations in that direction.

Now as to medicinal agents. We all know that purgatives, given *per se*, are injurious in a case of this kind. They call upon the peristaltic action of the bowels; and every time this is called upon the natural power of peristalsis in the bowel is lessened. Consequently, the more purgatives a person takes the more he must take, and all of them after a while lose their effect. In those cases where medication becomes necessary, I believe it is far more sensible to administer an agent which shall paralyze the inhibitory nervous supply and stimulate the sympathetic nervous supply. For this purpose I do not think there is anything equal to belladonna and strychnine. The "little pill" of belladonna, aloine and strychnine I believe to be the best known combination. These are agents which do the work of paralyzing, and I believe, in these cases, if morphine and atropine were given hypodermatically, you would have the desired effect without calomel. The check on the pneumogastric nerve as it is distributed to the bowel is lessened by belladonna; it paralyzes that nerve, allowing the feces to become free. I do not think we have, in the list of medicines, an agent which will do the work that belladonna does in this particular; not belladonna alone, but all its congeneric mydriatics, and all the mydriatics, act in the same way if we add to them strychnine, which possesses in itself a tonicity for the bowels.

I have seen several cass of chronic constipation in infants. In these cases I have found that rubbing or kneeding the bowels with the hands for five or ten minutes produces an alvine dejection. We want of course to increase the tone of the bowels but I would urge the use of simply large quantities of water as this alone will usually produce catharsis.

Dr. D. T. Smith: The subject up for dicussion as stated by the previous speaker is regarded as one of special importance. Dr. Skinner has narrowed the discussion very much by limiting it to functional constipation. The case reported by him may or may not have an application as illustrating a principle; I rather think it has not. It may be more reasonable to suppose that there is an adhesion at some point in the colon in the case of his patient and the peristalsis arising at that point after narrowing might be sufficient to cause that condition. We very frequently find that. However we do not often observe vomiting in cases of funtional obstruction. There is sometimes paralysis or peritonitis of that small portion of the intestine, which might be sufficient to cause death. I think from the history that the trouble is simply an adhesion causing a narrowing of the intestine or an arrest of peristalsis at same point.

Concerning the treatment of constipation: As this is a condition which is usually suspected to arise from an accumulation or obstruction of material that ought to have passed out with the fecal discharges, the most important thing is to relieve the patient of this obstruction and then administer remedies which are known to have a stimulating effect upon the bowels.

I reported before this society sometime ago, a case which Dr. Roberts saw with me, in which preparations were not exactly made, nevertheless everything was gotten in readiness to do an exploratory laparotomy for the relief of constipation. There was stercoraceous vomiting and other symptoms of obstruction. However, before the time to operate, we gave the patient a pint of sweet oil, knowing it to to be a safe remedy in any attack, and the result was an almost immediate disappearance of the distressing symptoms, the patient recovered and is in fine health to-day. In this case there was retroversion of the uterus, some post-pelvic peritonitis and evidence of adhesions which probably accounted for the trouble.

As Dr. Larrabee has said, the two remedies most relied upon in the treatment of constipation, as they do not irritate, are belladonna and strychnine, because they stimulate the muscular coat of the bowel, and by stimulating its action developing a strength that overcomes the atonic condition. As far back as 1861, I know that belladonna, nux vomica and compound extract of colocynth were given in this way. Aloes act as a stimulant in a similar way.

In regard to the use of water: There are two respects in which water will be beneficial. In the morning when we rise (with those of us who are subject to an accumulation of mucus in the lungs and stomach) the whole alimentary canal is covered with mucus accumulated during the night, and water taken early and freely will reach the lower bowel without being absorbed. Ordinarily there is an abundance of water passing into the blood and then back into the large bowel because we know a considerable number of substances are carried into the circulation and then back again through the large intestine, not reaching the small intestine. Therefore, about the only way to have water reach the small intestine unabsorbed is by taking it in the early morning. I find many patients unable to take more than a glassful immediately on rising owing to the nausea produced, and it becomes necessary for them to wait for a few minutes until this feeling passes off before taking a second glass. I direct them to take three or four glasses, if they find it necessary, or if less fails to do the work, until a sufficient quantity of water is taken before breakfast to secure an action on the bowels shortly afterward. I think one of the most important things in this connection is that we should have a certain time for evacuation each day. The absence of a fixed period for an effort at stool may be the cause of the trouble in many of these cases. Any person not giving the bowels opportunity to act at a given time will necessarily become constipated, even if the alimentary canal is in a healthy condition; then I think it is not a bad plan for awhile to induce excessive or over-action.

I believe if proper attention were given to the matter of having a regular period for evacuation of the bowels, and patients instructed to drink water in the early morning, and a sufficient amount later in the day, that the administration of cathartics could be done away with to a great extent. I am aware while I am saying this that there are a great many people who cannot drink water, cases of of gouty diathesis, etc., and for this class of people salines can be given which will carry the water through the stomach, which otherwise could not be done.

Dr. F. C. Wilson: I have been in the habit of using hot as well as cold water. Hot water is not quite as pleasant perhaps, but with the addition of a little lemon juice or salt it becomes really palatable and patients get very fond of it. I believe hot water preferable to cold, as it reduces the supply of blood in the capillaries of the walls of the stomach, which thus warmed up is driven directly through the liver, through the pancreas and neighboring organs, stimulating them to increased activity, and we have necessarily increased supply of bile. On the other hand it increases the digestive fluid supply, not only in the stomach itself but in the pancreas, so that digestion is improved and at the same time peristaltic action is stimulated.

Dr. J. G. Cecil: I have listened with a great deal of interest to the excellent paper read by Dr. Skinner, and to those who have already spoken. I fully agree that the subject of constipation cannot be too freely discussed, as it is a matter of very considerable importance. If I am a "routinist" in anything it is in giving purgatives, and I very seldom undertake the treatment of a case of any kind without very carefully inquiring into the condition of the bowels and generally find that a purgative is demanded, and usually also find that all medicines as Dr. Larrabee has very properly said, are increased in their efficiency, by having the alimentary canal cleared out before their administration, I have for a long time been very much of the same opinion as the essayist with regard to the administration of water and have often recommended it. I believe that the beneficial effects derived from many of the mineral springs which are visited owing to their advertised efficiency for constipation, depend largely perhaps, upon the water taken because it is water and not so much from the fact that it contains medicinal properties; quite so much also upon the quantity and regularity with which it is taken.

Concerning the point raised by Dr. Larrabee in regard to constipation in infants: This is a matter that has caused me a great deal of trouble in my practice. Very frequently infants nursing or feeding upon the bottle, become obstinately constipated and I have recently been in the habit of advising that the children be given water. I think this is a point that is often overlooked in the treatment of children, the mother or nurse naturally assuming that the infant gets sufficient quantity of water in the milk. I believe constipation in many of them is very agreeably affected and frequently cured by the administration of water.

The case reported by Dr. Skinner is one of extreme interest; the history shows that this woman was nearing a point where surgical interference was urgently demanded. However, at the first visit I made (having seen the patient after she had been constipated several days, and after large quantities of purgative medicines had been given, after she had had injections also and with the history of the case given before I saw her), I was led to suspect a very different condition from what I really found; the patient was in a fairly good condition, not particularly anxious in expression, not restless, not tympanitic, no fever, no tenderness, fairly good pulse, and thoroughly rational; and under the most careful and searching examination, I was unable to locate any tender spot or tumor in the abdominal cavity or any accumulation of fecal matter. The hernia or whatever it was in the inguinal region to my mind had no bearing upon the case. I think if there had been an adhesion or stricture of the bowel at any point, as hinted at by Dr. Smith, we would have had a different line of symptoms from those present. I would hardly have expected to have seen an amelioration of symptoms without perfect relief, and I would have certainly expected to find an accumulation of fecal matter above this constriction, which we could not locate. I do not think I remember to have ever seen a case that resisted such heroic doses of purgative medicines as this woman did. Probably a week after my first visit Dr. Skinner met me on the street and told me that she was still constipated; he had tried injections and flushing the bowels (Dr. Mathews' suggestion), which I am sure was followed out with a thoroughness not often practiced, as Dr. Skinner did the work himself, and had there been simply an ordinary constipation of the lower bowel, I am satisfied this treatment would have solved the problem. But as already indicated, there was no effect. She was benefitted by the amount of water used in these injections, as I understand several were retained. To my mind there is no cause assignable for the obstinate constipation in this case, other than torpidity of the liver and bowels. Possibly there might have been temporary paresis of the small bowel; the constipation I am satisfied was in the small bowel.

Dr. T. S. Bullock: I only want to speak of the manner in which the flushing was done in this case: It was done through a rectal tube passed to the sigmoid flexure, a copious amount of fluid being used as already indicated, and if there had been an accumulation of fecal matter in the larger bowel, and I am inclined to think that it would have been very promptly removed by these repeated large amounts of water. Only a very small quantity of hard fecal matter was brought away by the injections.

Dr. W. Carroll Chapman (visiting): I would like to mention one point in this connection, which seems to me to come under the head of functional causes of constipation, especially in women, and that is lack of effort, which is often due, I find, to pain due to congestion and the attending sensitiveness in the genital organs—the ovaries, uterus or vagina. I have often seen women who were not constipated so far as desire goes, but complained that when they wanted to have stools they could not do so, excepting the effort caused them so much pain that they would not make sufficient effort to produce an evacuation. It seems to me where this is the case, and I am satisfied that in women it does occur frequently, we should by hot injections or special applications, as may seem best, endeavor to relieve this condition which would doubtless relieve or possibly entirely cure the constipation.

Dr. J. A. Larrabee: The element of colic has been alluded to, which was entirely overlooked by me in my former remarks concerning Dr. Skinner's case. How are we to determine that it was colic? One feature of one kind of constipation that ought to be alluded to is that caused not by paralysis but by constriction. For example take a case of lead colic, if you please, a case in which you have a portion of the intestines ligated by a circle of fibrous material with extreme pain. What kind of a purgative would you give there? Certainly any effort to increase the peristaltic action would increase the trouble. Under these circumstances I believe that large doses of opium will produce an action from the bowels, an agent which it is well known will produce constipation. But under these conditions an action is produced upon purely scientific principles, it paralyzes the circular fibres. Whenever I see a case of lead colic and obtain that history, (I usually find that the patient has already taken large quantities of purgative medicines without effect) I administer large doses of opium and it has been my experience that relief follows. Instead of paresis we can have an oposite condition of constriction by the circular fibres.

Dr. D. T. Smith: I intended in my former remarks to refer to Dr. Larrabee's statement as to the way in which belladonna affects the bowel. I believe that the doctor claimed that the good effects of this drug were produced by removing inhibition. I have never heard of any teaching that belladonna acts in this way. There are no ganglia situated in the walls of the intestines stimulating their action, as there are in the heart. Belladonna we know, acts doubly upon the heart; acts directly upon the heart muscles, at least, acts by inhibition of the motor centers from its own ganglia.

I believe that the increased peristalsis is due to direct paralysis, not to an inhibitory one, as the doctor claims.

Dr. J. A. Larrabee: All experiments upon the subject of belladonna which have been conducted by vivisection and otherwise, have shown that this above all other drugs places the intestines in peristaltic action. Wherever there is a branch of the inhibitory nerve, belladonna acts, no matter whether by the capillaries, heart, liver or otherwise; wherever inhibition goes, there stimulation goes, and both go to every part of the economy. Every action of the body is controlled by two forces, like driving a horse with two reins; between the two you get a rhythmical action, but when one or the other is crossed, a different result is obtained. Of course the effect of belladonna is through its action on the pneumogastric nerve. The benefit is derived by taking off the power of checking.

Dr. C. Skinner: Concerning the administration of morphine in the case referred to in the paper: We all thought, after it had been given, that we ought not to have left the hypodermic injection there. If I had left the atropia without the morphine, I think it would have been better, as the morphia was undoubtedly the cause of the marked symptoms the second day. I believe it is a great mistake to give a hypodermatic of morphine when you want to make a differential diagnosis in such cases.

As to constipation in infants: Water can be administered in these cases with good results just as with adults. Mothers and nurses all tell you that the baby will not take water. That may be true, but the reason is that they have never been taught to take it. After a little perseverance on the part of nurses the baby will of course take a sufficient amount of water to obtain the desired result.

As to massage: That was not mentioned in the paper, I referred simply to the water treatment.

I agree with Dr. Smith that having a stated time for evacuation of the bowels is an important factor. There is one thing above all others that a physician will observe in the treatment of constipation, and that is the little attention that these people give to periodical movements of the bowels. One reason why it is so common in women is that on account of their false modesty, or, for various reasons, they do not attend to this call of nature as they should. In this way constipation is started and then keeps itself up.

Referring to Dr. Wilson's remarks in regard to his preference for hot water: I use cold water because I think patients will take more of it, and it is easier to take. In this special class of cases where we have young women from fifteen to thirty years of age to deal with, they will not take hot water. In older people probably hot water is more preferable.

Dr. Chapman mentioned one very important thing in reference to constipation in women, that is, pain produced by any effort at stool; for instance a displaced ovary may render defecation very painful, especially if the feces have become hard, the pressure upon the prolapsed ovary will produce such pain that the patient is unable to make the necessary effort at stool. The majority of these cases are usually controlled by divulsion; you can take a case of this character and dilate the sphincter, after a short time relief will usually follow.

Dr. Bullock spoke of the injections in the case reported by me. I know that these injections were very carefully given, and were really irrigations. I used a No. 7 tube its full length. In the first or second injection probably an ounce of fecal matter came away, after this nothing was returned except the injected water; for that reason we believe that the trouble was not in the large intestine, but a torpid small bowel.

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SATURDAY, JULY 22ND, 1893.

EDITORIAL.

THE PREVENTION OF SURGICAL INFECTION.

Most members of the profession can remember when the relation of bacteria to wound infection was a mere hypothesis conceivable from *a priori* considerations but supported by comparatively few crudely made and half studied observations and vulnerable at every point to the keen, critical scrutiny to which every proposition is subjected. When in the unremitting search after truth, scientists put it to the test of practical utility this hypothesis deepened into conviction. Clinicians began to teach the theory of sepsis and the technique of antisepsis, at first tentatively but with increasing confidence until at length with the full assurance that the microscopic objects which they could demonstrate, cultivate, transplant by inoculation and again collect, were the tangible causes of suppuration and septic complications.

In 1886-7 Donald McLean, then of the University of Michigan, was almost the only operator who dared perform coeliotomies in the public clinic. Two years later, Dr. Goodell tried the same experiment in the Hospital of the University of Pennsylvania and considered himself justified by the results. The standard antiseptic dressing in most Philadelphia clinics at that time consisted of layer after layer of wet bichloride gauze, while the light, dry dressing was condemned on the ground that it did not adhere to the skin tightly enough to prevent the insinuation of germs beneath it. The fact was entirely overlooked that the most favorable results were achieved with the dry dressings and that the heavy, wet bichloride pack, like a poultice, softened the underlying tissues and provided one of the three requisites for septic fermentation—moisture.

It is unnecessary to allude to the inevitable "modification" by the ubiquitous parasite of genius who bores for notoriety, or to the succession of chemicals that have been in vogue for longer or shorter periods. Antisepsis, in lessening the death rate, in eliminating septic complications, in extending the field of operative surgery and, above all, in impressively teaching the truth of its fundamental principle, asepsis, has achieved a notable triumph over all older methods.

It is perhaps remarkable that in general surgery there is no great difference in the success of those surgeons who rely upon boiling water, baked cotton, soap and the scrubbing brush—in a word cleanliness, and the success of those who have faithfully used bichloride of mercury, potassium permanganate, carbolic acid, hydronaphthol, or creolin, zinc or iodoform. Even the careless ones who occasionally let their sutures drag across the table, or who adjust eyeglasses without again cleansing their hands, have obtained results not much inferior to those of the most scrupulous followers of modified Listerism. After all, it must be remembered that antisepsis, or asepsis, is not a ritual but a means to an end, and perhaps the very men whom to-day we call careless, deserve the name no more than do those who have taught us that air—even the air of a crowded amphitheatre—may be admitted about a wound with impunity, and that the continuous antiseptic spray is not only useless but dangerous.

One after another have the idols of antiseptic surgery tottered beneath the blows of bacteriology. Bacteria have lived in dry iodoform; carbolic acid to be rapidly efficient in killing or paralyzing germs must be intolerably strong, and, *vice versa*, if tolerable, its solutions are practically useless save for extremely slow disinfection; we have seen mould grow on leather over which a hydro-naphthol solution had been spilled, and even corrosive sublimate solutions are now alleged to be resisted by bacteria rolled up in silk or catgut threads. In fact, boiling water and the actual flame are almost the only germicidal agents in which we may believe.

Why then has the antiseptic surgery of the past few years, based, as we are now informed, on exaggerated ideas of the efficacy of chemicals, and too often practiced inconsistently or negligently, yielded such magnificent results? Why is it that methods so utterly different in detail that the uninitiated would not dream of tracing them back to a common belief in the malevolent action of vegetable germs, have been in accord in leading to the prompt healing of wounds without suppuration? We can scarcely hold that sincerity of purpose would bring the same result from such varied modes of practice and must look for a common-place explanation. It would seem that the tests applied to antiseptic reagents by bacteriologists have been too rigorous. The bacteria experimented with have, for the most part, been taken from pure cultures, and have been abnormally abundant and virulent. The conservative element of phagocytosis has been lacking, and in many instances spore-bearing bacilli of exceptional resisting powers, and, fortunately, of considerable rarity, have been selected. It must be born in mind that bacteria are but peculiar kinds of weeds, a few hundred or thousand of which may do little harm and may even be choked out of existence by the phagocytes. Moreover, the ordinary septic germs are not very hardy plants and they are quite easily killed or at least reduced to insignificance by the chemicals which fail in the case of such vigorous exotics as the anthrax bacillus.

In general surgery the issue between asepsis and antisepsis is mostly a question of the surgeon and his surroundings. The man who has the habit of cleanliness—who keeps clean his own person, his instruments, his assistants, his nurses as well as his patients and surroundings—who has the time and patience to acquire cleanliness and who can control surroundings to an extent sufficient to maintain it, (nothing is more difficult than to be clean surgically speaking), such a one may well advocate the practice of asepsis to the exclusion of chemical substitutes. But the every day practitioner who cannot control his surroundings, who is unable to avoid contact with contamination, who may be frequently and unexpectedly exposed to contagion and to the ordinary saprogenic and hypogenic germs, who must accept required assistance of the most unsatisfactory character, who has to combat dirt and ignorant relatives even more than disease, whose facilities and equipments are meagre and imperfect and who cannot maintain even if he can acquire cleanliness—it is well for such a one to reinforce his imperfect efforts at asepsis by any or all chemical agents he can bring to his aid. Asepsis is the ideal condition, antisepsis a means for attaining it.

TRANSLATIONS.

THE PYELITIS OF PREGNANCY.†

Ninay (*Le. Bull Mèd.* June 7, 1893) remarks that inflammation of the ureter and renal pelvis in the course of gestation has but slightly attracted the attention of physicians and obstetricians, either because it is an affection very rarely observed or rather because the signs and symptoms which accompany it have been unrecognized and reported as cystitis. The onset of the complication is variable. At times it produces much disturbance in the form of grave general symptoms with chills, vomiting, acute pains; again the progress is most insidious and tedious, the phenomena less accentuated, the pyelitis is added to an already existing nephritis and manifests itself under the title of this simple complication. Two patients are reported, as follows: the first a young woman of twenty-six, primipara at the eighth month of pregnancy. She was exposed to a cold spell of weather and at the same time became much fatigued by walking a long distance. In the evening she experienced a violent chill, followed by three others during the night. Her temperature rose to 40° C.; there was no vomiting, diarrhoea, nor cephalalgia, urine was scanty, there was but slight painful micturition, and the urine contained an abundance of pus, was acid, but there were no casts or blood corpuscles. At the same time there appeared an acute pain in the right flank and corresponding renal region. Pressure increased this pain, which prevented the patient from moving, so that she could scarcely turn herself in bed. Three days later after an instrumental labor she was delivered of a living child. Fever and pain persisted for several days, the urine remained purulent for a still longer period and convalescence was prolonged. The second patient presented a history and clinical course almost identical with this.

The principal symptoms of this condition of acute inflammation of the pelvis of the kidney are lateral abdominal pain over the renal region, radiating down the ureter and extending to the bladder, but slight trouble with micturition, indifference to pressure over the bladder, the capacity of which always remains considerable, the fever and general symptoms in proportion to the infection, and finally the presence in the urine of innumerable pus corpuscles. The predisposing causes are the congestive state, traumatism, and retention; the determining cause is microbic infection. The congestive state is not an additional circumstance; it is common to pregnancy and the puerperium. Retention is especially frequent during pregnancy, whilst contusions of the ureter are the exclusive consequences of the operations and traumatisms that accompany parturition. From the point of view of the predisposing causes there is a certain difference between the pyelitis that precedes delivery and that which follows. During pregnancy we observe to intervene the retention and urinary stasis that are determined by compression of the ureter in its pelvic course. This compression only exists on the right side. It is the rule in this form of pyelitis, and if purulent pyëlitis of the left side exists it is extremely rare and always consecutive to parturition. Its origin, moreover, is distinct; it is an extension from an already infected bladder. The infection which propagates itself by rising from the bladder affects indifferently either of the ureters.

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† Translated for The Medical and Surgical Reporter, by W. A. N. Dorland, M. D.

Compression of the ureter was noticed in 1870, by Halbersma who regarded it as a favorable condition for the development puerperal eclampsia. But, long before him, Cruveilhier had drawn attention to the fact that increase of the lower uterine segment produced a compression of this canal, as observed upon the cadavers of pregnant women dead before delivery. The anatomical reason of this peculiarity is without doubt the usual inclination of the uterus to the right side, and as the iliac artery juts out more markedly on this side it becomes easy for the ureter to be compressed between this vessel and the presenting fetal part. The existence of general symptoms more or less grave, the presence of pus in the urine, show that there is present an infectious disease, because we may legitimately apply to pyelitis the precept that Guyon has indicated for cystitis; *there is no pyelitis without pus.*

The renal retention that results from the compression of the ureter is incapable of itself of provoking a persistant inflammation. The intervention of an infectious agent is necessary. The interesting researches of Reblaub have furnished us with some ideas as to the nature of this agent. He has observed constantly in the urine of patients with pyelitis, the *bacterium colli.* This habitual inhabitant of the intestine is not pathogenic under ordinary circumstances, but it may acquire virulent properties under the influence of course poorly defined, among which may be mentioned chilling, fatigue, errors of diet. If the colli bacillus become virulent, fixes itself upon the mucosa of the renal pelvis, it is because this place is modified and its soil has become favorable to the localization.

The progress of pyelitis occurring in the course of pregnancy varies; at times the effection is simple—rest will cure it; at other times the gravity of the general symptoms interrupts the pregnancy, and parturition puts an end to the symptoms. The diagnosis is, Vinay believes, nearly always easy. The progress is generally not very grave. Miscarriage may result in some cases, and after the emptying of the uterus the symptoms pass away. As regards treatment, in the benign forms, horizontal repose, baths, regimen, and proper hygiene will suffice to cause an amelioration if not a disappearance of the symptons. Emollient drinks in large quantities, and the use of milk in the form of a mixed diet to the amount of 1½ to 2 liters daily may be added. Absolute milk diet will be necessary if a nephritis complicates the pyelitis. The employment of mineral waters is often of value; the best are the feebly alkaline waters, as the waters of Pouguer, Alet, and Vittel. Local vessicants, sinapsiams and subcutaneous injections of morphine are serviceable. If there should be sufficient gravity of the symtoms, menacing the life of the patient, labor may be induced.

Abnormal Development of the Teeth, Forming Tumors of the Jaw.*

Dr. O. Hildebrand, of Göttingen, makes a further statement upon the case which he reported in 1889, in which the child of 12 years, who had been submitted to various operations, had been relieved of between 150 and 200 teeth of various sizes.

In July, 1891, patient had again presented itself at the Göttingen Surgical Clinic; both lower jaws were much thickened, as also the right upper jaw. On the whole there were found 17 teeth, part of them normally developed, others in an undeveloped condition; their position was deviated and irregular.

From the upper and lower jaw there were again some masses of teeth removed, which had the same confirmation as those formerly described, and presented about 150 teeth; aside from this, there were found two round glassy bodies about the size of two peas, which upon microscopical investigations showed themselves to consist of tooth structure. The construction of teeth in this patient will continue, in all probability, until the soft tissues have all reached their final development, which will include the epithelial structure of the teeth.—*Deutsch Ztschr. f. Chir.*, 35-5-6—93.

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*Translated for The Medical and Surgical Reporter by Marie B. Werner, M. D.

REMARKS UPON THE TECHNICAL CONSTRUCTION OF THE ANUS PRETERNATURALIS IN A CASE OF INOPERABLE CARCINOMA OF THE INTESTINE.

The author's (Helferich) method consists, in the above named classes, in

1–Laparotomy at the typical place of the left Iliac Fossa, the incision being made large enough to find the Aponeurosis of the oblique abdominal externis muscle. This is sufficiently divided to make it possible to form an artificial sphincter.

2–The Flexura Sigmoidea is drawn forward with the finger or with a hemastatic forceps.

3– In order to prevent the hernia of the intestines, the upper portion of the Flexurà must be stretched slightly in its attachments, with a rubber drain previously surrounded by an iodoform gauze.

4–Consists of a secondary opening of the intestinal loop, three to six days after the first operation, no narcosis; a spindle form piece is cut out of the loop.

The results obtained by the author have been on the whole very good, there having been a general increase of the patients' health after the operation.

In gastrotomy Helferich makes use of the rectus abdominis, which he splits parallel to the mucle fibre, in order to form the sphincter. The opening through perinæum muscles and skin is when united to the walls of the stomach which has been drawn forward; it is united by catgut, and apex is fixed with silk sutures. The stomach is then opened, a relatively thick walled rubber drain is inserted and fixed into the wound of the stomach. Drains are tied with silk transversely over the abdominal wound.

The three cases operated upon were conspicuous by the prompt success of the operation, and above all, since then alimentation is continued without any difficulties.—*Deutsche Med. Wochen 1893.*

ABSTRACTS.

PAINFUL MICTURITION IN WOMEN.

In an admirable lecture upon this subject, Herman (*Provincial Medical Journal*, vol. xii., No. 138) states that about one-half the patients who consult a specialist for diseases of women complain of pain in passing water; but it is only the diseases which cause severe pain which require special treatment, so far as the urethra and bladder are concerned. All these cases of severe pain depend upon local diseases, which can only be discovered by direct examination. There are three places in which disease may exist occasioning this suffering,—namely, the *meatus urinarius*, the urethra, and the bladder. Pain in the *meatus urinarius* may be caused by *urethral caruncle*, by chronic congestion or suppurating cyst of the urethra, by abscess of the urethro-vaginal septum, or by a tender, congested condition of the urethral mucous membrane. Chronic congestion of the urethra is chiefly seen in pregnant women; the urethra is swollen and tender and feels like a thick cord. Not only the act of micturition, but sexual intercourse may occasion almost unbearable suffering.

The treatment for this condition is complete rest, cold sponging on the part, cold hip-baths, the use of vaginal astringent injections, one or two leeches applied by a glass leech-tube to the swollen and tender urethra, and gentle laxatives.

Chronic abscess of the urethra-vaginal septum is rare, and is characterized by a tense, hard, convex, bullous, very tender swelling between the urethra and vagina.

The treatment is evacuation. If there is a spot on the vaginal aspect of the swelling which is thin, and fluctuation is felt, the proper course would be to cut into this thin part. If there is no such spot the urethra should be dilated under an anæsthetic until the canal will admit the finger, and the purulent collection can be evacuated through the urethra.

Suppurating cysts of the urethra form a pouch communicating with this mucous canal by a narrow, somewhat valvular, opening; urine gets into the pouch, decomposes, and inflames the sac. On examination, a round, tender swelling is found in the urethro-vaginal septum, varying in size from that of a pea to that of a hen's egg. By pressure there will be voided either urine or urine and pus, sebacious matter, or a calcareous deposit, depending upon the nature of the cyst. These cysts do not run the course of an abscess, which gradually close up once an opening has been made for the escape of pus, but they continue indefinitely in the same state, alternately filling with pus and urine, and being partially emptied by pressure.

The treatment is excision of the whole or greater part of the cyst-wall. This is best accomplished by first laying open the cyst freely from the vagina. What is next to be done depends upon the skill of the operator. The cyst-wall should be dissected out and the raw surfaces brought in contact by means of either cat-gut or shotted sutures. If a portion of the cyst near the opening is left and the rest is closed, the object of the operation will nevertheless probably be obtained, for if the pouch is obliterated there will be no place in which the urine can be retained and decomposed, and therefore no inflammation. If the operator mistrusts his manipulative skill, it may be enough simply to open the cyst freely from the vagina, and then, by keeping the vaginal opening from closing by packing with lint or gauze, retention of fluid in the cyst will be prevented, the urethral opening may close, and then the cyst will be left with an opening only into the vagina. If no more urine gets into the cyst-cavity, inflammation will subside and no further symptoms will be exhibited.

If there be much inflammation of the cyst, of the urethra, or of the bladder, it may be well to make no attempt at closing the opening until such inflammation has been subdued by appropriate treatment. If the cyst is suppurative, or not open, or the urethral opening of an inflamed diverticulum has become closed, the condition cannot be distinguished from an abscess. When the pus-cavity has been opened, its cystic character will be inferred from its definite smooth fibrous wall. An abscess has not a thick fibrous wall. The inside of a diverticulum may be trabeculated, so that the origin of the pus-cavity cannot always be surely made out from the feel of the interior. If the cavity be an abscess, it will quickly fill up; if it does not quickly become obliterated, it should be treated as a cyst. In some cases the patient will complain of severe burning, cutting pain at each act of micturition, but the meatus will be found to be healthy, nor on palpation through the vagina can any area of inflammation be felt. On urethroscopic examination of the mucous membrane it will be found a vivid red or deep purple, appearing in patches or involving the whole mucous surface. Passage of the catheter is extremely painful.

The treatment is to apply some alterative to the diseased mucous membrane; the best, in the author's opinion, is iodoform. The application is most conveniently made by putting into the urethra a bougie made of iodoform and cacao butter. A little wool put between the labia will prevent the bougie from slipping out. In recent cases the use of three or four bougies will cure the patient. In cases of very long standing more prolonged treatment will be required. Nitrate of silver is also serviceable in this condition. In some cases application of nitric acid to the tender part is followed by relief. Dilatation of the urethra is also to be recommended. In some cases both the meatus and urethra are healthy, but on passing a bougie great pain is experienced as it enters the bladder. In these cases a urethroscopic examination will show either hyperæmia or fissure of the vesical neck, the symptoms of extreme pain on micturition persisting afterwards; also great frequency, and difficulty in emptying the bladder. Sometimes a little blood escapes with the urine. The urine is clear, and there is tenderness about the vesical neck. Direct examination shows the fissure as a small grayish ulceration, with red, inflamed edges at the vesical neck.

The treatment consist in dilatation of the uretha under anæsthesia ; this is best accomplished by meana of Hegar's dilatators until the urethra admits the finger. Temporary benefit always follows this procedure, and sometimes permanent cure. The objects to this treatment are that there is danger of septic infection of the bladder and of permanent loss of control over the sphincter. Inconvenience rarely results unless dilatation is carried beyond the point necessary to admit the finger. In case dilatation is unsuccessful in relieving symptoms, vaginal cystotomy is indicated. To preform this operation a director should be introduced into the uretha and held exactly in the middle line. Open the bladder from the vagina by cutting upon the director. If the incision is exactly median, no important part can be wounded. To prevent this opening from closing, Greenhalgh's India-rubber stem may be employed, or the vesical mucous membrane may be sewed to the vagina on each side by a catgut stitch. All pain ceases at once, and if the artificial fistula is kept open long enough, the ulcer heals, and then the fistula can be closed and the patient remains well.

To minimize the discomfort of the artificial incontinence resulting from this operation, the patient should be kept upon a fracture-bed. The rest in bed is of itself beneficial. If nothing is done to prevent the healing of such an incision of the bladder, it soon either heals or contracts to a canal only large enough to admit a probe. As to how long this fistula should be kept open no rule can be given. If as the fistula heals symptoms return, the artificial opening should be again enlarged.

Baker's method of treating these cases is to keep the patients in bed for only a few days, then to fit them with a urinal, and allow them to get up and enjoy fresh air and exercise. The fistula is kept open for months, and is not closed until the interior of the bladder has ceased to be tender and, in case of cystitis, until all trace of pus or blood has disappeared from the urine. This, however, sacrifices the advantages of rest, and it has the discomfort of constant soiling of the clothing.—*Therapeutic Gaz.*

THE CAUSE WHICH DETERMINES SEX.

In speaking on this subject before the Capital District Medical Society, the author states that he approaches it with an unaffected timidity and difference to open it for discussion.

I am thoroughly aware of the difficulties surrounding the matter, and more especially since all that may be, or can be, said will be largely of a speculative character.

There is one curious feature connected with the subject: it is also an incontrovertible fact, which has its weight in the consideration of this subject. I refer to the fact that—no matter what the cause, whether from battle or otherwise—whenever there is a large depletion of the male population, nature brings about an equilibrium by bringing a majority of males into the world. It matters not by what name you denominate the causes tending to this fact, one will necessarily conclude that it is divine,—a reason being, that a great preponderance of females and a scarcity of males would lead to social disaster and ruin. This is not exactly predestination, but a physiological process left partly to "chance;" but now, I hope, under the control of man.

The best state of society is found where the sexes assume about equal numbers. The apparently most natural and at the same time easy deduction is, that the sex is regulated by direct divine intervention. Granting this, the subject would be at rest: there remains nothing more to be said.

I have given the subject close attention, careful consideration, and diligent study; and, without arrogance, I think I have discovered the true theory.

That a great boon would result to humanity were this the case, there can be no doubt. Hereditary habits could be corrected, etc.; for the reason that female children are less likely to become victims of the various hereditary habits than male children. Along with this, however, would come the danger of an unequal proportion of the sexes.

There are, as far as I know, *four theories*, exclusive of divine interference, that have been advanced, none of which seem to be satisfactory.

1.—If conception takes place in the dark of the moon, the child will be a boy; if in the light of the moon, it will be a girl. This is too absurd for consideration.

2. All the eggs in one ovary are male eggs, and all in the other are female eggs. This cannot be accepted, as women have frequently given birth to both male and female children after one ovary had been extirpated.

3. If conception takes place before menstruation, the child will be a male, if after menstruation, a female. This is contradicted by the fact that male as well as female children have been born to women who were separated from their husbands either before or after menstruation.

4. If at the time of conception the sexual desire and passion is greater in the father, the child will be a female; and *vice versa*. This will not hold good, as many women who have never felt any satisfaction in sexual congress have given birth to both male and female children.

Let us now direct our attention to what I consider the true theory. In the stroma, or body of ovaries, are found 7,000 to 30,000 ovules or eggs, which ripen and mature, from one to six at a time, about once a month: one-half of these are male eggs, and will develop into male children; one-half female eggs, which will develop into female children. Ripening takes place alternately; first a male egg, next a female egg, etc.

That sounds very well, but the critic asks: Can you prove it? I think the following authentic and carefully-selected statistics, collected during the last three years, will establish the fact almost beyond controversy. I find one case where a young girl became pregnant at the first menstruation; the child was a male; two that became pregnant at the fourth menstruation, each bearing a female child; one that became pregnant at the 5th menstruation, the result a male child; 7 that became pregnant at the 10th menstruation, all bearing female children; 12 becoming pregnant at the 25th menstruation, all the children being males; one becoming pregnant at the 54th menstruation, a girl being the result. In case of twins, two eggs have ripened at a time if the children are of different sexes; if of the same sex, three eggs have ripened,—one failing to become impregnated. I have found three *corpora lutea* in a patient who had died of puerperal eclampsia after giving birth to two male children.

If a woman becomes pregnant at the next menstruation *after* giving birth to a male child, the offspring will be a female, and vice versa. I found six women who became pregnant at next menstruation after giving birth to a male child, and the result was a female offspring; one case where a woman became pregnant at 2d menstruation after, and the child was a male, 10 cases at 5th, and 8 cases at 6th, with the expected result. (*)

But what about a *hermaphrodite?* In my opinion, there is no such condition; it must be either one sex or the other. The supposed penis is either an enlarged clitoris or a malformation.

—*Amer. Med.-Surg. Bulletin.*

The Use of Thiol in the Treatment of Burns.

Bidder (*Archiv fur klinishe Chirurgie*, Band xliii., 1892) says that in treating burns a dressing should be selected that does not require frequent changing.

Thiol may be used in two forms, the fluid and the powder. Its action on the burnt surface is:

(1) As a drying substance.
(2) Relieves the pain.
(3) Hardens the new skin.
(4) Hinders the growth of all micro-organisms that may have gained entrance to the wounded parts.

Treatment of Comedones.

Dr. H. Von Hebra (*Hospitals-Tidende*, No. 11, 1893) prescibes the two following solutions in the treatment of blackheads:

1. ℞ Rosewater, Alcohol, Glycerine, } ....āā gms. 10(℥ijss)
Borax .... gms. 5 (ʒj¼)
Shaking before using.

2. ℞ Green soap .... gms. 40 (℥j¼)
Spir. lavender.............. gms. 10 (℥ijss)
Alcohol...................... gms. 80 (℥ijss)
Every morning wash the skin with No. 1, and then rub in No. 2. Then wash off with warm water.

Naso-Pharnygeal Catarrh of Nursilngs.

Dr. Neumann (*La Semaine Medicale*, No. 33, 1892) has obtained excellent results in the treatment of naso-pharnygeal catarrh, so severe even as to interfere with nursing, by employment of the following solution:

℞ Sulphate of zinc........ gms. 0.10 (grs. jss)
Water.................... gms. 15 (ʒiv)
Instill a few drops of this solution into each nostril several times a day.

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* The author's theory *fails*, however, to explain the fact—quoted by himself—of the preponderance of male births in a region largely depopulated of males, and vice versa; unless he brings the 4th of the *current* theories, above cited, to his aid: to the effect that *fecundation*, under a scarcity of males, will more readily occur on the male ova, on account of the more intensive orgasm on the woman's part.—[ED.]

SELECTED FORMULÆ.

Treatment of Hyperidrosis.

Several new formulæ for the treatment of sweating hands and feet have been recently introduced. The following are among the best of them:

The *Monatshefle fur Prak. Dermat.* recommends an alcoholic solution of borac acid, borax, and salicylic acid, as follows:

℞

Boric acid	℥ j
Borax	
Salicylic acid	āā ℥ij
Alcohol	℥vj

Mix and make a solution, with which rub the palms of the hands or soles of the feet thrice daily.

The *Centralblatt fur die Gesammate Therapie* recommends the following mixed treatment:

℞

Beta napthol	ʒij
Glycerin	℥ss
Alcohol	℥v

Mix and dissolve. Use as a wash to the parts affected twice daily; dry, and apply the following powder:

℞

Beta naphthol	gr. xxiv
Starch	℥v

M. Pulverise and mix.

—*Ex.*

Bromidism may be prevented by combining an intestinal antiseptic with each dose of the bromide salt as follows:

℞

Potassii bromidi	gr. xxx
Beta naphthol	gr. xx
Sodii salicylat	gr. x

M.

Embalming is accomplished by a new process attributed to Dubois, a Frenchman, in which the body is dehydrated by means of amylic alcohol or nitric ether, or a mixture of both injected in the usual way. It is placed in an air-tight chamber and surrounded with calcium chloride and its entire surface is eventually coated with a solution composed of balsam tolu and benzoin in equal parts in ten times their weight of either. According to the *Br. and Col. Dr.*, the body is said to retain its natural appearance.

Brown Leather Polish.

℞

Annatto	½ ounce
Catechu	1 ounce
Gamboge	½ ounce
Gum acacia	½ ounce
Hydrochloric acid	1 fluidounce
Water	2 pints

—*Bulletin of Pharmacy.*

Prof. Hare gives the following prescription as useful in the sub-acute stages of bronchitis :

℞

Vini ipecac	fʒj
Tinct scillæ	fʒij
Syrup tolutan	fʒv
Aquæ destillat	f℥j

M. Sig.—Teaspoonful every three hours.

Eczema of the Vulva.

Lusch employs the following :

℞

Tincturæ opii Sodii bicarbonatis	āā gms. 8
Potassi bicarbonatis	gms. 4
Glycerini	gms. 6
Aquæ destil	gms. 206

Prof. Graham is of the opinion that the prognosis of hereditary syphilis in children will depend to a great extent on the length of time that elapses between the birth and the appearance of the eruption. The sooner the eruption appears after birth, the better will the prognosis be.

Tape worm.

℞

Pelleturin sulph	gr. vi-viiss.
Pulv. acid tannic	gr. viiss.
Syr. simpl	ʒij

M. Sig.—Take the above the following morning before breakfast. Fifteen minutes after take two tablespoonfuls of castor oil.

—*Labbe, Ex.*

Acne.

Dr. G. T. Elliot prescribes :

℞

Zinc sulph Potass. sulphuret.	āā grs. v-xxx
Aquæ rosae	℥j
Sulphuris praecip	grs. xx-xl

M. Sig.—Apply to face three times a day.

Prof. Keen gives the following formula for Morton's fluid ; useful where absorption is required :

℞

Iodinii	gr. x
Potassi iodidi	gr. xxx
Glycerini	f℥j

M. Sig.—Use locally.

Liquid Spice Plaster.

Med. Bulletin.

Capsicum,
Cloves,
Cinnamon,
Ginger, of each, 4 drs

Exhaust with stronger alcohol, evaporate to 4 ozs. and add to a solution of

Rosin	9 ozs to 2 lbs.
Venice turpentine	7 ozs.
Alcohol (95 per cent.)	12 ozs.

Spread with a camel's hair brush on paper covered with muslin, and apply in lumbago, muscular rheumatism pain in chest, etc., over place of pain.

A Deodorizer for Iodoform.

The following (*Norsk Magazin fur Lægevidenskaben*, No. 3, 1893) is recommended :

℞

Iodoform	gms. 187 (℥vj)
Carbolic acid	gms. 1 (gtts. xv)
Oil of peppermint	gms. 2 (gtts.xxx)

CURRENT LITERATURE REVIEWED.

THE AMERICAN JOURNAL OF OBSTETRICS for July. Dr. J. Whitridge Williams contributes an article on

Calcified Tumors of the Ovary.

He reports two cases of the disease and one case of calcified corpus luteum. He also says that, in several instances, the tumors sent him for examination as osteoma of the ovary proved to be simply calcified fibromata and in one instance, what was supposed to be a nodule of true bone was found to be a calcified corpus luteum. He further says that while true osseous tumors also occur in the ovary they are even more rare than calcified tumors. Of course, in speaking of calcified tumors of the ovary, all growths which are connected with dermoid tumors are excluded. The process of calcification is always preceded by more or less necrosis of the affected part. All forms of necrosis do not lead to calcification but particularly coagulation necrosis and then only under certain conditions. The general law in regard to the production of calcareous deposits seems to be coagulation necrosis to which some supply of blood or lymph is admitted. The clinical history of calcified tumors of the ovary does not offer any distinguishing features from other solid tumors of the ovary. They rarely attain great size; in one or two cases there was marked dysmenorrhœa; in several cases there was marked uterine hemorrhage, which ceased after the removal of the growths. It is impossible to distinguish the condition under consideration from other hard tumors of the ovary; when the diagnosis has by any possibility been made, the removal of the tumor is indicated.

Dr. Charles M. Green contributes a paper on

Puerperal Eclampsia,

giving the results in the Boston Lying-in-Hospital during the last eight years. As to the treatment of ante-partum eclampsia: Ether was used to control the convulsion and he believes that it is as safe as chloroform for that purpose. Chloral hydrate by the rectum was used as a sedative between the attacks. Morphia is not approved of, as in some cases it seemed to cause restlessness. The action of the skin is excited by means of the hot bath, hot air bath, etc., and for drugs, pilocarpin in gr. ⅙ doses, guarded by stimulants. If the skin does not act readily, the bowels are moved by croton oil or elaterium. Cream of tartar water and digitalis are used as diuretics. Venesection has not been resorted to. When it becomes necessary to deliver the patient rapidly, manual dilatation of the cervix is preferred to dilators or hydrostasic bags. Podalic version and manual extraction are preferred to forceps, unless the head is engaged. When the attack occurs during labor, it is the practice to deliver as speedily as possible. After delivery, chief reliance is placed on chloral, pilocarpin, hot bathing or the hot air bath, mild diuretics, and necessary stimulation. Post-partum eclampsia is treated, in general, in the same manner as in inter-partum cases after the labor has been completed. If symptoms of threatening convulsions appear during delivery, the labor is not hastened, if progressing normally, and treatment is directed toward allaying nervous symptoms and mildly stimulating the function of the kidney. The paper includes tables showing the number of cases treated and the results.

Dr. Reuben Peterson discusses the subject of

Tubal and Peritoneal Tuberculosis,

reporting four cases. He comes to the following conculsions:

1. Tubal tuberculosis, either alone or with coexisting involvement of the peritoneum, is far more frequent in occurrence than is commonly supposed.
2. Early operative interference is indicated in the presence of either tubal or peritoneal tuberculosis, as a safeguard against the further extension of the disease.
3. All cases of tubal or peritoneal tuberculosis subjected to a laparotomy should be drained, and whenever practicable, the iodoform gauze drain should be employed.

Dr. George M. Edebohls contributes a paper on

The Operative Treatment of Complete Prolapsus Uteri et Vaginæ.

The author states that, until such time as it can be shown that the results acheived by total extirpation of the uterus for prolapsus are better and more lasting, as well as that the operation is no more dangerous than the rival procedure, he will adhere to ventrofixation of the uterus combined with the necessary plastic operations as the rule, practicing total extirpation only on exceptional indications, as:

1. A uterus so large and heavy as that it cannot be reduced to an approximately normal size and weight by amputation of the cervix.
2. A uterus presenting either positive evidence or strong suspicion of malignant disease.
3. A uterus with appendages so diseased that the condition of ovaries and tubes calls for their removal, apart from other consideraations.

The author would also lay it down as an axiom that whenever the uterus is preserved in prolapsus operations it should be securely ventrofixated. The paper also includes a table of the twelve cases operated on by the author.

Dr. A. F. A. King reports a case of

Labor Obstructed by Ovarian Tumor.

In regard to treatment in these cases: The author is of the opinion that when the tumor is large and below the pelvic brim, and cannot be pushed back to make room for the child, the only modes of proceeding available would seem to be: [1] abdominal section of the mother, [2] mutilation of the child, or [3] puncture of the tumor. Playfair's tables give the best results from puncture of the cyst. In cases where the tumor is smaller and capable of being pushed up out of the way of the child, it becomes an interesting question whether such a method of treatment, with its well known risks, would be better than emptying the tumor by puncture.

Dr. S. C. Gordon discusses the

Dangers and Complications of Uterine Fibroids.

The conclusions arrived at are:

1. Uterine fibroids are always more or less troublesome, and in a majority of cases produce a state of chronic invalidism.
2. In a large percentage of cases they are complicated with excessive hemorrhages, peritonitis, salpingitis, and ovaritis, with purulent collections and adhesions, producing continual suffering.
3. Many of them do not cease growing at the menopause, but increase.
4. Many undergo degeneration, either calcareous, cystic, or malignant.
5. Hysterectomy is not a very dangerous operation if made in the early history of the case—no more so than ovariotomy.
6. In addition to the saving of life, it relieves (in nearly all the cases) the woman from the life of invalidism.

Dr. Charles P. Noble contributes a paper on "The Question of Operation in Cases of Chronic Ovaritis." The conclusion arrived at is that operation should be performed if continued well-directed treatment does not benefit the patient. Particularly is this the case with those women who are dependent on their own labor for support. The author also urges that all ovaries removed because of chronic ovaritis, should be submitted to a competent patholgist for careful study, that new light many be thrown upon these conditions.

Dr. H. Marion Sims contributes a paper on "Hystero-epilepsy," reporting seven cases cured of the disease by surgical measures.

Dr. Frank A. Stahl, in a paper on "Digital Curetting of the Puerperal Uterus," shows very clearly the great advantage of the finger over any form of instrument in these conditions.

The other papers in the current issue are: "Vaginal Enterocele in Pregnancy and Labor," by Dr. Barton C. Hirst; "The Abdominal Brain in Gynecology: Its Reflex and Rythm," by Dr. F. Byron Robinson, in which the author shows the part which the sympathetic system plays in abdominal diseases. The remaining paper is by Dr. Thad. A. Reamy on "Membranous Dysmenorrhœa."

THE VIRGINIA MEDICAL MONTHLY

for July.

Dr. J. R. Buist contributes a paper on

The Management of Retroflexio Uteri,

in which he has come to the following conclusions:

1. We believe that in the large majority of cases the predominant morbid state allowing of retroflexion is to be found in the uterus itself; a diseased state of this organ is the primum mobile of the trouble.
2. Next, an extension of the metritic disease to the tubes, ovaries, and peritoneum is the most usual sequence of changes, and the relaxation of ligamentous supports the last.
3. The skilled gynecologist will treat the complications first, resort to pessaries last, and when opportunity offers, or the symptoms severe enough, select some one of the surgical methods of fixation.

Dr. E. M. Magruder in a paper on

Aneurism of the Vertebral Artery—Its Successful Treatment,

gives the following:

1. Vertebral aneurism is very rare, and its treatment has been exceedingly unsuccessful.
2. The causes of the lack of success are (1) inaccessible situation and (2) errors in diagnosis.
3. Of the twenty-eight cases (the author's the twenty-eighth) mentioned in the paper, three were cured and twenty-five perished.
4. Of the three cases cured, one was treated by cold and direct pressure, one by enlarging the original wound and using a styptic and bandage, and one (the author's) by a combination of incision, evacuation, packing and compression.
5. Vertebral aneurism can be safely laid open and treated, the only danger being immediate hemorrhage. The requisites for success are quickness and perfect asepsis.
6 Treatment by incision, evacuation, packing, and compression is the safest, easiest and surest method yet devised for vertebral aneurism, and is bound to succeed.

Dr. Mathew M. Smith in a paper on

Hypnotism,

advises that the use of this agent be limited to graduates in medicine. Even then it should be confined to its legitimate uses in the treatment of disease. As to the conditions that are cured or benefitted by hypnotism, the author believes that all pains that have no antomatical lesion, as headaches, ovarian, rheumatic and neuralgic pains, sleeplessness and hysterical conditions, and many disturbances of menstruation, alcohol, opium, and tobacco habits may be cured by its use. Neurasthenia, stammering, and nervous disorders of sight are benefitted by it. It may be used in minor surgery and labor to diminish pain. In treatment, many sittings may be necessary in order to get the beneficial results desired. Some physicians will have much better success than others with its use, just as some surgeons have a more skillful use of the knife than others.

Dr. W. R. Pryor contributes a paper on the "Treatment of Sterility." The author believes that, in the majority of cases, the endometrium is at fault and advises the dilatation of the cervix followed by a through curetting of the entire endometrium and packing with iodoform gauze. The author reports several cases in which the above treatment was followed by conception in a short time.

Dr. John S. Hughson advocates, in a paper on "The Treatment of Puerperal Convulsions," the use of large hypodermics of morphia to control the convulsion.

Dr. R. A. Patterson contributes a paper on "The Treatment of Diphtheria." The author advocates the use of a mixture of potassium chlorate, dilute muriatic acid, tincture of the chloride of iron and water, internally, followed by the application to the throat of a mixture containing one ounce of fluid extract of pinus canadensis and ten to fifteen drops of phenic acid.

Dr. John N. D. Cloud in a paper on "Malarial Hæmaturia," cautions against the use of quinine until the hemorrhage has subsided and the skin has regained its natural color.

Under "Clinical Reports," Dr. A. B. Pierce reports a case of ovarian tumor which has been tapped nineteen times.

Dr. John Dunn reports a "Case of Complete Bony occulsion of One Side of the Nose."

Other papers in this issue are: "Purulent Puerperal Peritonitis," by Dr. Virginius W. Harrison; "Reform Needed as to Medical Expert Testimony," by Dr. William B. St. John; "A Few Facts in the History of Abdominal Surgery" by Dr. Anne Walter; "Organic Syphilis," by Dr. Henry Robbins; and "What the General Practitioner Should Know About Diseases of the Eye" by Dr. Frank Trester Smith.

PERISCOPE.

MEDICINE.

Terpene Hydrate in Bronchial Catarrh.

Dr. Wm. Murrell (*Med. Age*) says:

I am desirous once more of calling attention to the value of terpene hydrate in the treatment of affections of the bronchial and nasal mucous membranes. Its properties have been well known for many years, but in this country it has never been a popular remedy, and its claims seem to have been overlooked in favor of pure terebene and other similar compounds. It is a hydrate of turpentine, and is made by treating oil of turpentine with nitric acid and alcohol. It is a solid, and has somewhat the appearance of chloral hydrate. Its odor, which is slight, resembles that of pure terebene. The great difficulty in the way of its administration is that it is practically insoluble in water. It is usually said to dissolve in alcohol in the proportion of 1 in 10, but many specimens are far less soluble. On the Continent, where it enjoys a high reputation in the treatment of bronchial affections, it is used as a popular remedy in the form of an elixir. For some months past I have prescribed it in a solution containing five grains to the half-ounce, made up with simple elixir and flavored either with tincture of Virginia prune and syrup of tar or with aqua laurocerasi. For patients who cannot take sugar the elixir may be made with saccharine. Terpene not only relieves cough and lessens bronchial secretion, but is a diuretic, and has been used with advantage in neuralgia.

Ichthyol in the Treatment of Erysipelas.

Glinsky states that during the last four years he has tried ichthyol with great success in one hundred and twenty-eight cases of erysipelas. He concludes that this drug is decidedly the best means of all yet proposed for the treatment of this disease. It rapidly arrests the spread of the morbid process and reduces the average duration of the disease down to two or three days. The method is of the greatest value in all cases in which cardiac weakness, due to fatty degeneration of the heart, is present in patients with nephritis.—*Zemsky Wratsch*, 1892, Nos. 39 and 40.

Chloride of Iron in Diphtheria.

Drs. Hubner and Rosenthal (*Munich Med. Woch.*) in two separate communications speak enthusiastically of the results of treating diphtheria by means of the chloride of iron. Hubner applied it locally in a 1.1 or 1.5 solution by means of a swab or brush, two or three times a day; Rosenthal, internally, in a 20 per cent. solution with glycerine as a corrigiens, a teaspoonful to a tablespoonful every hour. The results with both were astonishingly good.

The Condition of the Spinal Ganglia in Tabes Dorsalis.

R. Wollenberg states that it is still a mooted question whether the seat of the primary changes in tabes dorsalis is in the spinal cord or outside of it. It is true that changes in the peripheral nerves and spinal ganglia have been frequently discribed, without its being possible, however, to determine their true pathogenic importance. In fourteen cases of tabes, Wollenberg has made examinations with regard to this point, with the following results: In the spinal ganglia, in all the cases examined, not only the nerve-fibres and the interstitial connective tissue, but also the ganglion-cells themselves were found to have undergone pathological changes. The excess of pigment and the shriveled condition of the cells can, of course, not be considered as a sure indication of disease; but this is not the case with the opacity of the protoplasm, which is always present, and with the agglutination of the cells, which may, undoubtedly, be regarded as typical of a pathological process. Although it is thus proven that in tabes the spinal ganglia present pathological changes in all their elementary parts, yet these changes of the ganglion-cells may be regarded as insignificant in comparison to those occuring in the nerve-fibres and in the interstitial connective tissue.

We cannot, therefore, assume that tabes originates in the spinal ganglia, nor that the latter are the primary seat of the trouble; it is most probable that the changes occuring in the ganglionic cells of the spinal ganglia are only of a secondary nature, and are induced by a perineuritis developing in the region of the spinal-cord process and gradually involving the nerve-elements (first the nerve-fibres, then the ganglionic), cells and inducing atrophy.—*Archiv fur Psychiatrie*, vol. xxiv.

Arsenical Neuritis.

Osler (*Montreal Med. Jour.*) relates a case to show that long continuance of full therapeutic doses of arsenic may lead to the development of peripheral neuritis. The patient was a Pole, suffering from Hodgkin's disease, affecting the cervical, axillary, and inguinal glands. During a period of seventy-five days he took ℥iv, ʒj. m xviii of the liquor potassæ arsenitis, equivalent to sixteen and one-half grains of arsenious acid. The dose, for the greater part of the time, with some intermissions owing to diarrhœa, was m xv three times a day. Increased pigmentation of the skin was noticed at an early period of the treatment, and, after about seven weeks, it was noticed that the muscles of the upper and lower limbs were tender to the touch, and that he walked stiffly. The knee-jerks which were then present had disappeared in another fortnight, and he was scarcely able to walk at all. The muscular power of the arms was diminished. The excitability of the muscles of the legs to both currents was diminished, and A.C.C. was equal to, if not greater than, K.C.C. Osler observes that idiosyncrasy must play a part in the production of arsenical neuritis, which is very rarely produced by therapeutic doses. He had only once before met with a case which raised the suspicion of neuritis, though he has been in the habit of treating pernicious anæmia, Hodgkin's disease, and chorea minor with arsenic, pushing the drug until its physiological effects were produced—itching of the skin, slight œdema, vomiting, or diarrhœa.

SURGERY.

Removal of the Seminal Vesicles.

Since Ullman removed both seminal vesicles for tuberculous disease, by Zuckerkandl's method—which consists in exposing the prostate and base of the bladder, by dividing the anterior attachments of the rectum and then freeing it from the prostate and lower part of the bladder—Roux has reported tw cases in which for tuberculous disease he has removed one seminal vesicle together with the spermatic cord and testicle of the same side through a lateral perineal incision, reaching the vesicle by a dissection carried upward between the prostate and the rectum.

Dr. George W. Gay, of Boston, in May, 1891, removed the right seminal vesicle, through a lateral perineal incision (similar to that practiced by Roux), for cancerous disease thought to be primary in the vesicle. Six months later the wound, which had healed well, reöpened; the examination revealed a hard mass, about the size and shape of the forefinger, in the site of the seminal vesicle which had been removed.

Villeneuve reports a case in which he removed one seminal vesicle by exposing the spermatic cord outside the inguinal canal, and by freeing and pulling on the cord until the seminal vesicle was sufficiently brought down to be reached and excised.—*Boston Med. and Surg. Jour.*

Prostatectomy.

The question of the advisability of this operation was lately brought before the profession by Mr. Buckstone Brown, who recommended the operation when a patient had to use a catheter every 2 hours, and life was a burden in consequence. He quoted the case of a gentleman, æt. 72 years, on whom he had operated a year ago for a small stone and finding the prostrate much enlarged he had removed two ounces of the gland; the patient can now pass all his water without requiring the use of a catheter. The general feeling of the society was that the supra-pubic method was the best, and that the gland should only be removed when obviously projecting into the bladder cavity. Bleeding is the worst feature of the operation, and can best be prevented by using special small toothed forceps which crush as well as remove the gland. All agreed that there was a considerable risk in the operation.—*Calcutta Med. Rep.*

Pneumonectomy.

It was briefly stated in the *British Med. Journal* of February 25, that Dr. Lowson, of Hull, had operated on a case of tuberculous disease of the lung by removing the right apex, to which the disease was limited. We are glad to learn that the patient bore the operation well, and was able to get up for a short time in the third week; she was then eating well and had no pain. The operation was commenced by the removal of the anterior third of the second and third ribs; the parietal layer of the pleura was opened and the apex of the lung was pulled out after separating a number of extensive adhesions; the diseased apex was then transfixed with a needle and strong silk, firmly tied and removed. The sudden development of pneumothorax gave very little trouble and oxygen, which was at hand, was not needed. The respirations were never more than 44, and dropped in a day or two to 32, and soon after to 24; the pulse showed a similar elevation and decline. The highest temperature was

101.8°; this occurred in the second week and lasted five or six days, with complete morning remissions. The wound was quite healed by the end of the third week. The after history of this patient will be watched with much interest.—*British Med. Journal.*

GYNECOLOGY.

Noble (C. T.) on Certain Problems in Abdominal Surgery; Based on One Hundred Celiotomies.

The paper is an elaboration along the lines indicated in the following extracts:

The essentials of success in abdominal surgery are:

1. Early operation.
2. Careful preparation of the patient, with especial reference to stimulating the emunctories and to securing asepsis of the abdominal wall.
3. An aseptic operating room.
4. Aseptic hands and instruments for the surgeon.
5. As great rapidity in operating as is compatible with careful, thorough work.
6. Irrigation and drainage in septic cases.
7. Careful after-treatment, embracing especially the withholding of fluids for about forty-eight hours, early purgation and at least three weeks' confinement to bed.

Regarding the question of drainage the author says that the better results obtained at present without drainage, as compared with the results of ten years ago, is explained by five facts:

1. Surgeons do cleaner work; they are more aseptic than formerly.
2. They have better means for securing hemostasis.
3. They do not use irritating chemical antiseptic solutions in the peritoneal cavity.
4. They deprive their patients of water for forty-eight hours after operation, thus producing systematic thirst and bringing about the absorption of serum from the peritoneal cavity.
5. They purge early and freely on the first sign of peritoneal irritation.

He believes that the use of a drainage tube may cause hernia, and that it may prove an open door for infection. A carefully compiled table of cases closes this sensible article. —*Am. Jour. Obstet.*

Vaginitis from Bestiality.

The patient (*Weekly Med. Rev.*) was "a smart, pretty, well educated" twenty-six-year-old country girl, who was found to be suffering from a profuse, thick, sticky, greenish yellow vaginal discharge of an extremely offensive odor, completely gluing the parts together. The discharge had been present for about a week, coming on suddenly. After washing the external genitals and opening the labia three rents were discovered, one through the fourchette and two through the left nymphæ. The vagina was found to be excessively congested and covered with bleeding points on the least irritation. Gonorrhœa was the presumptive diagnosis, but coitus was denied, albeit menstruation was stopped, and the patient was terribly perturbed about pregnancy. Under pressure, she confessed that one day she was playing with the genitals of a large dog. She became excited and thought she would have slight connection with him, but after the dog had made an entrance she was unable to free herself from him, as he clasped her so firmly with his fore legs. The penis soon became so swollen the dog could not free himself, and for more than an hour she made the most persistent efforts to do so, and finally making the ruptures before spoken of, and followed immediately by the discharges and inflammation. She was given the usual treatment for gonorrhœa, enjoining rest and soothing treatment until inflammation had subsided, since which time every kind of injection and treatment, applied both to the vagina and uterus, has failed to cure the discharge, pus cells being still abundant in the discharge; menstruation is normal. There was reason to suspect that the bestiality continued. The case is not unique, as Dr. I. C. Rosse (*Va. Med. Monthly*) reports that a young white single woman was surprised copulating with a large mastiff, whose endeavors to release himself caused fatal vaginal hemorrhage. The bony structures of the dog's penis, and the reversal attempted after completion of the canine sexual act, would be very likely to inflict wounds of the kind described in the first case.—*Medical Standard.*

Gonorrhœal Infection of the Mucous Membrane of the Mouth in New-Borne Infants.

From the study of five cases of gonorrhœal infection of the mouth in the *Konigsberg Obsterical Clinic*, Dr. Rosinsky has drawn the following picture of the disease: Without preceding inflammatory redness, a white discoloration appears upon the anterior two-thirds of the tongue, the tongue, the plaques of Bednar, the hamulus pterygoideus, and along the ligamentum pterygomandibularum in the lower jaw, finally upon the front parts of the gums. After twenty-four to thirty-six hours the color becomes yellow. The patches elevate themselves plateau-like over the surrounding tissues, and their surfaces are raw. The superficial epithelium forms with extravasated pus cells, a thick layer, resembling the scrapings from the cut surface of a septic spleen. On the third day the regeneration of the epithelium begins; this is marked by an inflammatory redness around the edge of the patch. Healing follows without treatment, in an ideal manner, no trace of scar or discoloration remaining. From the microscopical examination of some excised tissue, Rosinsky has gleaned the following: The gonococci were never found, in stained sections, intra-cellular. They were seldom found intra-cellular in the superfical flakes.

Gonococci cannot penetrate into the body of healthy, living cells; they accomplish this only when the single cells are cut off from the conditions of life. In the connective tissue gonococci invasion was found. Rosinsky believes this to be typical pure gonorrhœal inflammation of the mucous membrane. The relatively infrequent gonorrhœal inflammation of the mucous membrane of the mouth in adults, in contradistinction to infants, he believes to be due to the tenderness of the epithelium of the mouth in the new-born.—*Annals of Gynecology.*

A STUDY of the effects of removing the ovariés shows that for some time there are menstrual molimina and the ordinary signs of the climacteric appear. The deposit of fat in the abdominal walls, buttocks and other parts of the body is attributed not to excess of nutrition but to vaso-motor changes. When the uterus is removed and the ovaries left behind the latter do not atrophy, as has been claimed, but subsequent autopsies have shown them unchanged in size and containing Graafian follicles ripening or breaking.—*Northwestern Lancet.*

Supra-pubic Lithotomy.

Lawson tait thus describes the *technique* of this operation: "I make use of no precautionary measures or preparatory steps. I neither pack the rectum nor distend the bladder. I stand on the left of my patient and cut upward two inches and a half, starting immediately over the ridge of the pubic arch, exposing the tendon at one sweep. I then cut the tendon transversely over about one inch close to the bone, and cut it centrally for an inch and a half. I then pass my left forefinger between the bladder and pubic arch and follow it with a pair of forceps. I gently rend the tissue till I can feel bladder wall. This can easily be detemrined by its peculiar feeling, and by the fact that once the forceps grip it they hold, and they do not hold merely cellular tissues. Having fixed one pair, I then fix another close to them. My assistant takes them and gently pulls them apart, as in abdominal section; a notch of the knife follows, and a rush of water declares the road into the bladder for the forefinger to be open. The rest is all finger work, and consists as in abdominal sections of a gentle, but firm extension of the opening into the bladder, till the lithotomy forceps can follow it. All my cases have recovered without complications, and though up to the present I have used a glass drainage tube, I am of the opinion that this will prove an unecessary precaution, and that it will be safe to close the bladder by deep sutures."—*Lancet.*

Fecal Fistula following Hernia—Closure by Resection of Intestine.

At the London Hospital Mr. Frederick Treves recently operated on a boy, æt. 16 years, who, six months ago, had been operated on for hernia. Probably the intestine was gangrenous, as it had been left in the wound, and a double fecal fistula resulted. The double opening in the intestine was freely exposed, the gut drawn out, and three inches of the ileum were removed. The ends were approximated by Lembert's suture.—*Med. Press and Circular.*

ARMY AND NAVY.

U. S. ARMY FROM JULY 9, 1893, TO JULY 15, 1893.

The order assigning Captain Freeman V. Walker, Assistant Surgeon, to temporary duty at Fort Trumbull, Conn., is so amended as to relieve him from future duty at Fort D. A. Russell, Wyoming, and to assign hin to station at Fort Trumbull, Conn., until further orders.

1st Lieut., Charles F. Mason, Assistant Surgeon, July 2, 1893, promoted to be Assistant Surgeon, with the rank of Captain.

Major James P. Kimball, Surgeon, is relieved from duty at Fort Clark, Texas, to take effect at the expiration of his sick leave of absence, and ordered to Fort Marcy, New Mexico, for duty.

Major William H. Gardener, Surgeon, on being relieved by Major Woodruff, is ordered to duty as Attending Surgeon and examiner of Recruits at Steadgrs, Dept. of Dakota, St. Paul, Minn., relieving Capt. Walter Reed, Assistant Surgeon, U. S. Army.

Capt. Reed, upon being relieved by Major Gardner, is ordered to report to the Surgeon General at Washington, D. C., for duty as curator of the Army Medical Museum, and as professor of clinical and sanitary microscopy in the Army Medical School.

Captain William H. Corbusier, Assistant Surgeon is relieved from duty at Fort Wayne, Mich., and ordered to Fort Supply, Indian Territory, for duty, relieving Major Paul R. Brown. Major Brown on being relieved by Captain Corbusier is ordered to Fort Hamilton, N. Y., relieving Major Ezra Woodruff, Surgeon Major Woodruff on being relieved by Major Brown is ordered to Fort Keogh, Montana, for duty, relieving Major William H. Gardner, Surgeon.

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ORIGINAL ARTICLES.

POST-OPERATIVE SEQUELÆ OF PELVIC AND ABDOMINAL SURGERY.*

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The occasion and the peculiar auspices under which I appear here can scarcely fail to be to me somewhat embarrassing. I cannot avoid a feeling of inadequacy for a work which on account of its momentous importance should be well done. It may be claimed that all has been said; then what I say, I only throw in as confirmatory of that which is accepted as complete. That all has been said and the best done is a shallow assumption. We are just beginning to talk and that but stammeringly—and as yet much of our surgery is bungling and blundering. We do not esteem the facts we have as all there are. We prize our advances the more for their promise of something better, we find in them prophecy of yet more splendid development and yet greater discoveries in our science; of more originality and greater simplicity of method. Our country has given us great names to place beside those on the other side of the ocean. Yet we need to greatly multiply the reasons for our boasting.

Personally we hope to avoid pretension, to give out only those lessons our experiences have taught us. My deductions will not be theoretical, but these drawn from actual experience. The importance of adopting simple and direct methods, those tried, tested and practiced by a number of successful operators, should influence all beginners in the choice of methods. The fact that A and B have been the most successful operators, that their mortality has been low, that they complete their work at any cost, that serious post-operative complications have been of rare occurrence are facts worthy of serious consideration by the practically inexperienced. We have a valuable surgical literature recording for us the methods which have withstood successfully many tests in the experience of our best surgeons. By careful study of this literature, which is at easy command, there can be gleaned many lessons that will serve a good purpose in puzzling and trying cases, such as come to every surgeon no matter what his skill.

Though we have been rapidly simplifying our somewhat ambiguous surgical nomenclature there is still much confusion, lack of definiteness of application in many of our terms. In discussing post-operative sequelæ and some of the causes leading to the same, we will not concern ourselves as to terms used to designate pelvic and abdominal conditions, those having for us no very special clinical value. The endeavor will be to use such terms as will make our meaning clear. We hope we have a better understanding—a clearer conception of our subject—than we have of any dead language, the Latin or the Greek, that you will not need an English, Latin or Greek glossary to get at our meaning and that our facts are such as can be made plain even through limited and imperfect English. In our work the sequelæ of what we do is the one supreme concern. Notwithstanding the sequel of many procedures have been a fruitful source of skepticism with many, the gynecologist and obstetrician have gone on and through improved skill and technique have brushed away many old objections and obstructions; they have grown in the consciousness of their ability to deal successfully with cases which in a near past were allowed to suffer on without relief. We have arrived at the point of knowing that many women suffer from diseases that cannot be cured or even relieved of their severer symptoms by purely medical treatment; that we frequently meet with pathological conditions that medicine, massage, or electricity will not relieve; that grow from bad to worse and that only surgery can reach; that for many cases there are only two avenues of relief, skillful surgery or death.

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* Lecture delivered at the Post Graduate Medical School of Chicago.

Here I would mention that a great number of deaths are of patients where there has not been even a suggestion that surgical interference would save life. In many instances death comes before the physician even recognizes the character or gravity of the trouble; before a correct diagnosis is made, and again to that group classed by operators as hopeless when first seen, who are permitted to suffer on and die without an attempt being made or offered for rational surgical relief. Again a third group, a most distressing class to the surgeon, who is willing to give the one chance, those who die on the table, or soon after the operation—never reacting. There is current among the more or less intelligent laity and the more or less, usually the latter, intelligent non-specialist and general practitioners, that the results in abdominal and pelvic surgery are either eminently successful or else woefully responsible for a train of after results in the unfortunately surviving patient, that render it scarcely a permissible branch of surgery unless the former results can be absolutely promised. Just why this should be is a little difficult of explanation unless the early history of this special line of work is considered, together with the methods of certain operators, with whom promises were a part of the means by which operation in many cases was obtained. In no other division, of either medicine or surgery, is it demanded of the physician that his results be absolutely certain and that he guarantee after immunity from all trouble allied to that which he undertakes to remove. Unfortunately there are some at present, possibly not so many as formerly, who in order to obtain chance for operation, were ready to promise everything; just as the ready witted politician has offices waiting for every one whose franchise shall be cast for him. Mrs. X, shall have no more pain, while Mrs. Z, shall be absolutely relieved of every appearance of her monthly disturbance, while Mrs. Q, shall never again suffer constipation or tenesmus, and so on throughout the whole catalogue of diseases, for which operation is ever done or suggested. Now this was all unfair both to patient and operator. Operation is done to definitely remove certain diseased conditions, and to remedy aberrant physiological conditions incident thereto. Any more than this cannot be promised. No more than is promised in the treatment of every other disease. The physician called on to treat a case of typhoid, does not insure his patient in the event of his recovery total immunity from all the sequelæ incident there to. Neither does he on taking charge of the case give absolute assurance of the recovery itself. Neither should the surgeon be required to do so except within the limits of his own experience in the conditions for which he is about to operate. No surgeon should promise recovery to his patients on the grounds of the results of others, unless his own experience is absolutely parallel with theirs. The beginner in abdominal and pelvic surgery, unless after a long and careful preliminary training, and unless accompanied in his work by a careful and experienced operator, must usually have less perfect results than the surgeon of a wide and intelligent experience. I say intelligent experience, because there are operators and operators, and some with a wide and varied experience must never be looked to surpass the line of medocrity. An operator who in the midst of a serious case, looks about him, and addresses the spectators, " Now gentlemen if you have any suggestions to make, I am ready to receive them " is hardly the man any one of you would select to operate upon wife or mother.

A general must be quickwitted, ready to modify the details of his movements to meet strategy of the enemy, but he must needs use his own wits, and not delay to send home for advice. Now all this you may say is foreign to the subject at hand, but I beg to submit, that, post-operative complications and sequelæ, have to do with all the factors casually suggested in these prefatory remarks. For your more intelligent appreciation of the same I shall divide them, group them, if you please, as I have most frequently met them, into three classes:

First: Post-operative sequelæ due to complications induced by delay in operating.

Second: Complications induced by faulty work and methods.

Third: Sequelæ, which may be said to follow naturally any serious surgical procedure of the nature under consideration.

Incidentally, as following along the line of thought here suggested, will be considered the ways and means best adapted in the light of surgical experience to avoid the avoidable in the way of unsatisfactory results in this branch of surgery.

Delay in operating is at once the bane and danger of all pelvic and abdominal surgery; baneful to the surgeon, dangerous to the patient. This is true in all the various conditions met in the pelvis and abdomen, but especially true in two diverse conditions, pus in the pelvis and in tumors of the uterus. I have long earnestly advocated the prompt removal of all puriform degenerations in the pelvis, and the longer and farther my experience grows, I find I have no reason to change. The logic that hesitates at an early amputation in order to save an inch or an ell of a leg, while thereby life may be risked, is only half-way foolish as compared with the procrastination that dawdles with puriform disease involving the integrity of the vital abdominal viscera. Pus within the pelvis is at once a present and a far reaching menace to the safety of the patient. Its extension is not limited geographically nor anatomically nor functionally. Pus that starts in the tube may burrow through the diaphragm, or show itself in a pulmonary abscess, while, an appendicitis may rush through like a Johnstown flood and assail the very vitals of the economy. Now while the results of retained and imprisoned pus may be thus fulminant in their nature, they may also be insidious, slowly attacking the vitality of the sufferer, bringing on a train of evils, which like gossip growing with a thousand tongues, gains by going and is dangerous apace. Pus if it is not absorbed is irritating and excites inflammation, and inflammation brings about adhesions among the organs surrounding the pus focus. So it is that an inflammation starting in one organ often necessitates surgical interference with another entirely distinct from it physiologically and distinct from it anatomically. Bowel adhesions are most common in delayed tubal operations, and where the puriform degeneration has gone beyond a certain time the bowel instead of being adherent is often really gangrenous, and its treatment brings into the field the most delicate and painstaking intestinal surgery. Now in these cases we must look upon the intestinal surgery both in the light of operative complication and of being indirectly the cause of post-operative complications and sequelæ. Its presence as a complication of the original operation for the removal of the pus tube is incident to delay in the original operation, and is a necessity on account of this delay. Without it the operation as at present necessitated, would be a failure or a very bleak success. But if on account of this necessary bowel surgery there is after trouble brought on by stenosis and diminished calibre of the gut, is the surgeon or abdominal surgery responsible for such result however unfortunate it may be? Can such sequelæ be for an instant considered argument against either the results or legitimacy of abdominal work, or against the perfection of its methods, apart from preceding calamitous neglect? I think the good judgment of all must decide that in such cases surgery has not had its chance. And so, if after a case has been neglected until a general peritonitis supervenes after a long period of pus-infection, and consequent loss of vitality in all structure, so that, as often happens, the stitches in the abdominal wall will scarcely hold and there is a consequent necessity for the whole incision to heal by granulation, can it be charged to surgery that its methods have been faulty or inefficient? Certainly not. Whatever after complications arise, adhesions, hernia, fistulæ or else of this uncanny clan, must be laid directly at the door of the bad logic and poor wisdom of those to whom the delay is attributable.

The same reasoning, and possibly with even a greater scope in the possibility of the complications, will apply to neglected cases of uterine tumor. These are apt, as you all know, to be tampered with by every agency under the sun. Each and every dilly-dallier is busy seeking methods and modifications and refinements of dilettante-quixotism in order the more to steer shy of the true surgical treatment of which they have a mere smattering of information and this theoretical—not practical. While these empirical devices are being put into practice the disease travels on apace, the tumor increases and trespasses upon other important organs, interferes with their integrity by pressure, contracts adhesions with bladder, intestines and omentum, and, so the disease steadily progresses, the tumor increasing in size and irregularity, which with the increased density and thickness of the adhesions makes its removal a daily increasing difficulty. This is the more likely to be true if tampered with by electricity, with or without puncture—all the more if puncture is used at all.

It will be understood at a glance that the reasoning that applies to the two distinct affections here alluded to, must surgically apply to all diseases of the pelvis and abdomen. This is probably true of appendicitis, than which there is not a more neglected disease, nor one in which so much is "trusted to nature." Delay here is the very essence of danger, and often puts us once and for all outside the possible chance of relieving a patient. It is unnecessary for me to further insist upon this fact here. Both your instructors and your instruction are *en courant* with all that is best on the subject. Under this head it is only necessary to again insist that whatever is logic in one set of abdominal diseases, from a surgical standpoint, is logic in all, and that early surgery soundly applied, is the *open sesame* to all success in their treatment.

The second series of complications I have classed as those due to faulty work or methods. Under this head I have most frequently found adhesions about the incision or indeed throughout the abdomen and pelvis, due to the presence of irrigating fluids. It used to be thought that chemicals were the highway to cleanliness, that an otherwise dirty surgeon could be clean if he had a basinfull of bichloride solution at his side—a sort of dirt "Taboo," so to speak. This had its effect in the complications under notice, and the banishment of this harmful superfluity has worked good in many ways, first by taking away a frequent cause for re-operation, and second, in teaching operators that cleanliness is an essential, inherent trait of the man and cannot be grafted on him by chemicals.

While considering adhesions, it may be well to refer to their imperfect handling as a very pregnant cause of unsatisfactory results in pelvic surgery. When they exist they are not to be attacked wildly and rudely, but are to be broken up carefully, and each step guarded by careful inspection. If by chance the gut is torn through, it is at once to be mended, all else being for the time suspended unless it is the stoppage of hemorrhage. Tears in the omentum are to be dealt with after the same manner, otherwise pitfalls are left for the unwary intestine, whereby to strangulate itself. All peritoneal destruction is to be avoided, and any portion of surface operated upon that can be covered with peritoneum is a direct safeguard against adhesion; this is especially true of large fleshy pedicles. In the removal of diseased organs it is necessary carefully to break up not only the adhesions existing between the parts removed and those remaining, but also those between all remaining parts otherwise healthy. Failure to do this is a fertile cause of bowel obstruction, resulting fatally in cases that would otherwise recover.

Coming next in order as a fertile source of mischief is the faulty handling of hemorrhage. At the bottom of much hemorrhage is the reprehensible use of cat-gut. The use of this agent ought to be avoided; except for the very smallest vessels it is not so safe as silk, and the latter has too much to recommend it, too many successes on its side to be theoretically argued out of sight. The careful tying of every bleeding vessel as it is met, and of pedicles in portions small enough to secure perfect stricture, with sufficient button, to prevent slipping, will give security against hemorrhage as it most freuqently occurs. Just here I will memtion a method or rather a procedure by which all surgery, especially that of hemorrhage, is presumably made easy. I refer to the Trendelenburg position. This was originally invented for the performance of suprapubic cystotomy. Those of you who have seen this operation know just how much need there is here of the Trendelenburg position, and in my opinion there is but little more use for it anywhere else. In all operations in which hemorrhage is likely to occur by oozing and indirect leakage it is a positive disadvantage. The patient is stood nearly on her head, and the natural gravity of the blood reversed. Now this together with a weakened circulation and the presence of surgical shock, will give apparently a dry field of operation, but when the natural recumbent position is assumed it will at once become prone to oozing and leakage which may soon become a serious matter. All oozing must be controlled and any step which veils or conceals its presence is a menace to the safety of the patient.

In this connection we may profitably consider improper drainage as a cause of serious complication after operation.

Drainage is well recognized as a surgical necessity in operations of all kinds. Under certain conditions its employment is not disputed or questioned, except in the abdominal cavity. Why this is so is not always easy to explain. In fact it is probably best not to attempt to explain every vagary that comet-like flits across the unsettled minds of many following the plough in the furrow of abdominal surgery. It is enough to carefully listen to the arguments on each side, weigh them well, see wherein is contained the least fancy and the most fact and follow the lines of presumptive safety. Much of the dissatisfaction over drainage is the result of crude methods and faulty care of the tube, and indeed of the patient. Most of those now condemning drainage have vaciliated between one method and another and finally, without having gotten satisfaction out of any method, they condemn all. Gauze, lampwick, bone tubes, new devices to keep the tube clean, all have failed, and like King Solmon after he had gone the rounds, they cry, "Vanity of vanities, all is vanity." The proper way to apply any method is to study the end to be attained, and then use means to accomplish this end. To remove accidental debris, irritating or accumulating fluids there is nothing that so well answers as the small glass drainage tube reinforced with the long-nozzled syringe. All other device is unnecessary. Gauze is a good primary but a poor secondary drain. It will not discharge lymph, nor will it insure the non-disturbance of the parts on its removal as is afforded by the simple glass tube. It likewise promotes adhesions, and these are the factors necessitating much after-surgery in the abdomen. All foreign matter introduced at the time of operation must come under the head of irritants and this is true of the drainage tube; the more so the longer it remains unless it is absolutely clean, and kept clean or in fact unable to get dirty. The improper handling of the drainage tube, its shifting or its rude handling may make it, in careless or unskillful hands, a source of danger and dis, comfort to the patient. This is, however- no argument against its proper use, and the operator who gets bowel fistulæ from it simply confesses that he has placed it improperly, while he who lays ventral hernia to it as a prime factor forgets that herniæ rarely appear in the lower angle of the wound where the tubes should always be placed.

Under the head of foreign bodies as a cause of mischief it is necessary to class big and unnecessary ligatures. Many small vessels can be secured by torsion whereby tying is rendered unnecessary. When this can be safely done it is by far preferable to the use of multitudes of ligatures. Big, heavy, braided silk is apt to cause trouble by non-absorption and by making a focus for suppuration. Hence it is the rule to avoid ligatures heavy past the absolute necessity of each individual case, and to apply as few as possible.

Big ligatures probably are oftener the cause of abdominal fistulæ than any other factor, unless it be in those of a fecal nature. These latter are caused by failure to mend weakened spots in the gut, or by badly placed drainage tubes.

I have neglected to consider one point in reference to drainage and to do this I shall go back for a little. I mean the consideration of the after condition of the patient. She is always quiet except in the rarest cases; her recovery is non-febrile, her tongue is clean, her secretions normal. I am speaking of course of cases in which there have been pus and adhesions. In simple cases this condition of affairs ought always to obtain. This is in marked contrast with cases in which, under similar conditions of operation drainage is not used. The contrast is as marked as that laid down in the books between concussion and compression of the brain. The quibblers cry your operation has not been clean or you would not need drainage; and again, before this alarm has died away, another investigating army explain away the use of the tube because it infects the stump and carries millions of microbes into the abdomen. Here is at once a confession and a plea. First, they do not know when or how to use the tube, and second, they explain it away on the ground of its causing what on the first hand they confess is a necessity for its employment. Such argument needs but little attention.

Passing on I shall class as imperfect surgery all that leaves behind removable diseased organs or conditions. Under this head must be placed vaginal puncture for pus in the tubes, and the vaginal removal of diseased organs. Both of these operations are unjustifiable: first, because they are incomplete, and second, because they do not allow the operator to manipulate freely enough to entirely relieve the patient either of her danger or discomfort. Pus tubes are not a simple condition, but are complicated with adhesions and, therefore, in order to deal with these all the vantage ground of operative position must be sought. This is impossible in the vaginal operation. Adhesions in pelvic disease are often the bulk of all the trouble, and hence they must not be left. Abscess of the pelvic organs is rarely a simple sac, and, therefore, cannot be cured by mere puncture. That once in a while such a case is met is no argument by which a general method is to be laid down. Enucleation and removal, drainage and freeing adhesions is the only proper mode of procedure.

A word now as to conditions following operation, traceable often to bad care of the patient or to improper surgical procedures. At the head of the list is ventral herniæ. Many patients are directly responsible for their own condition in this respect. Too early rising, too early laying aside the bandage, and foolish physical exertion, such as dancing, riding and the like, frequently bring on the condition for which the surgeon is in no way responsible. But on the other hand, over-anxiety of the surgeon to get an empty bed in his hospital or to chronicle a wonderful recovery, are among these secondary, non-surgical causes of this accident. The incision and its closure are to be carefully considered in this accident. A short incision, with the stitches uniformly introduced on either side so as to preclude turning in of the skin edges is this the best safeguard against accident. Personally I do not agree with those who introduce layer after layer of sutures. Again it is a recognized fact that incision through one of the recti, is less apt to cause hernia than linear incision. I submit that a series of carefully watched operations on this line would be of the greatest interest.

I have now gone over some of the chief causes of accident and complication in abdominal work, enough at least to give you food for thought, in the lines of real experiences without any theory whatever, and it remains for me at this time only to refer briefly to some of the after conditions of operation for this set of diseases, which naturally are to be expected. First are the phenomena attending the removal of the appendages. All women are not affected alike. Some endure their removal with immunity from discomfort, while others are for a long time annoyed with the phenomena attending the menopause. Hence it is not safe at once to promise perfect comfort to these patients, nor indeed to tell them even that the menopause will infallibly at once ensue. Some women persist in periodic hemorrhages, some cease at once, others continue more regularly than ever. The why of all this is not clear. Again in chronic cases, where the pain and discomfort has lasted long the recovery is often more or less tedious. Pain has become engrafted upon the organism and time only will remove it. To such patients must be given encouragement to await patiently the gradual restoration to health, just as they would expect to do in the external surgery of the body. Miracles are not to be expected here, neither is it fair to promise them. The same careful consideration of all the probabilities of the case should here be made; the same honest expectation of life and health afforded; no more, no less.

The manner, matter and methods of

abdominal surgery have to deal with humanity in channels that most concern it, and hence they afford scope for the widest humanitarianism, the truest philanthropy, the bravest hearts.

Our profession is adjusting itself to the spirit of the period; to its spirit of enterprise, research and invention. We now come to Chicago as to the world's great school, to this great city of the great West, which, in little more than half a century has become the second city of our country in population, and *very strongly second* in commercial importance; the enterprise of whose people could not be burnt out with the burning over of more than two thousand acres of the city's area. And here within its corporate borders has been built as by magic the "White City," in fitting celebration of the event that gave to mankind a new world. And thick peopled is this "White City," with those from our many states and from over the seas, all moving bewildered about what is so vast in suggestion, so immense with what has been done, is doing and is promised. Its walls of themselves make all the world marvel at the creations of American genius and enterprise. Amid these creations we stand amazed by the beautiful designing of the architect, by the studied, skilled, cunning work of the mechanic; by that beauty, proportion and strength which has been evolved from rude and uncouth conditions, all illustrative of the manual dexterity, the strength, skill and wisdom of master workmen. As we note the achievements of mechanical and industrial art we feel the stronger assurance of the immense possibilities of our own art,—we do not look for results to peculiar inspiration but to hard work. Our aim should be to make our art the supreme one, as it is *the one* that most intimately concerns human physical well being, the need to be workmen, trained to surgical dexterity, to greater certainty and accuracy than that which directs the thought and hand of the sculptor.

CLINICAL LECTURES.

PES PLANUS; CYST OF THYROID; MULTIPLE URIC ACID CALCULI; SARCOMA OF JAW WITH SUSPECTED SYPHILIS.

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Six weeks ago I operated on this boy for painful flat-foot, chiseling off the head of the astragalus on each side, so as to allow the feet to become slightly inverted and arched. If you will notice the impressions of bare feet you will see that we naturally walk on the outer side of the foot. This boy, on the other hand, was walking with everted feet, bearing his weight on the inner portion of the soles. After the operation the feet were dressed antiseptically and encased in plaster-of-Paris, which remained on five weeks. The patient is about to leave the hospital, the wounds are entirely healed and the shape of the feet is all that can be desired. It will be a month or six weeks longer before the tissues will have become firm enough to permit the child to walk. If, even at the end of that time, there is any tendency to stretch and allow the foot to regain its malposition, it will be necessary to apply a metal brace, suitably moulded to the lower surface of the foot, and then bending at a right angle and reaching up the side of the leg.

The first operative case is that of a girl of seventeen, with a tumor in the middle of the neck, which is probably a small goitre. In reply to questions which were not leading, she tells me that the tumor was first noticed at the time of puberty, there being at that time a small enlargement in the middle of the thyroid body. At each menstrual period, it has grown a little, receding somewhat before the next period but gradually becoming larger. This history is an illustration of the mysterious sympathy existing between the thyroid and the sexual organs of the female, a sympathy that is manifested in the growth of the thyroid during pregnancy. In some ill-understood way, the thyroid has something to do with the elaboration of the blood corpuscles, and when we remember that during pregnancy and at the menstrual periods there are calls for the renewal of the blood and an increase in its elements, we may understand somewhat the connection between the enlargement of the thyroid and the state of the sexual organs. Sometimes after delivery the enlargement of the thyroid retrogrades; sometimes it does not. I have now under care two private patients who have had three children, and each pregnancy has caused an enlargement of the thyroid, both lobes being enlarged, though not symmetrically. In the present instance, it is the central portion of the thyroid body—I do not like to call it a *gland*—which seems to be enlarged. The girl came to me a little while ago asking what could be done, and I told her there were three ways in which the trouble could be treated: first, by applying or administering drugs, a method which would do little or no good; second, by the use of electricity, which sometimes helps the condition a little but which is always slow and often futile; third, by surgical interference which is immediate and radical in its relief. Although I said nothing to her to urge operation, she at once jumped at the chance and decided to have the mass removed. If the tumor involved the whole thyroid, I should be averse to operating, for it is known that the complete extirpation of the thyroid is sometimes followed by a peculiar vital depression and imbecility to which the name cachexia strumipriva has been applied. But we have learned by experiments that a portion of the thyroid, even four-fifths, may be removed without danger, the remaining structure being sufficient to perform the function of the whole body.

This tumor is probably cystic.

[The tumor was exposed by a median line incision and found to be pedunculated. It was ligated with cat-gut and cut off from the small pedicle; the external suture was of the subcutaneous, continuous kind, in order to avoid cross-marks in the scar. The bandage over the antiseptic dressing was extended below the axillae in order to prevent disarrangement.]

The next patient is a decrepit old man, somewhat emaciated, who has suffered for at least two years with such bladder symptoms as frequent micturition, with direct and referred pains. He has been compelled to give up his occupation and, as he feels better in the recumbent posture, to spend most of his time on the lounge. His symptoms point either to enlarged prostate or to a calculus, or both, with consequent irritability of the bladder. He has been sent here from quite a distance, one of his attending physicians having touched a stone with a sound. On my first examination with ordinary manipulations I failed to discover a stone, and even the assistance of the finger in the rectum did not avail. I then drew off the urine and filled his bladder with a boric acid solution till he complained of distention, and then passing the sound I touched the stone. A difficulty in introducing the sound and the rectal examination showed also that there was an enlarged prostate, and, through the patient had just emptied the bladder as he supposed, nearly half a pint of residual urine was drawn off by the catheter, having been retained on account of the prostatic enlargement. I want to impress on you the fact that a stone which eludes ordinary searching may be detected by first distending the bladder.

Two questions arise, what is the character of the stone, and what is the best means of removing it? The urine is acid now and although the nucleus of the stone may be phosphatic, the shell at least is probably composed of uric acid. Uric acid calculi are always hard and difficult to crush, and an attempt to remove the stone in fragments through the urethra would be prolonged to a hazardous degree. I found also at my examination that the end of the sound caught in one or two places in the interior of the bladder, showing that there are pockets in which some of the fragments of the stone might lodge and form nuclei for other calculi. We must have recourse then to a cutting operation, and I have decided to enter the bladder by the supra-pubic route, which is not the quickest but which gives the best opportunity for exploration. The perineal section to a man used to the manœuvre is a rapid and may be made a brilliant operation, but it may be difficult to find the stone afterward. The supra-pubic section takes a few minutes while the perineal requires only a few seconds, but by choosing the former, I run no risk of injuring the prostrate, and I can find the calculus more readily and extract it entire. The supra-pubic method or *sectio alta*, was in vogue many centuries ago, but was abandoned for the perineal operation and has been revived only during the present generation. By many surgeons it is now used almost to the exculsion of the perineal operation. I do not believe however, that any one method is of intrinsic superiority, and think that each particular case should be studied and the decision made as to the preferable method in accordance with its special features.

The shaving of the field of operation has been deferred till anæsthesia is complete, in order not to alarm the patient who is quite timid. The urine is now withdrawn and the bladder filled with a boric acid solution. The attempt to pass a regular stone searcher with an abrupt curve, meets with considerable difficulty, but this large steel sound passes easily and you can hear the click of the instrument against the stone, which seems to be a large one. With the bladder distended, the peritoneal covering is raised some distance above the pubis, so that it is easy to enter the bladder without penetrating into the peritoneal cavity. The longitudinal incision in this instance, fails to encounter a plexus of veins which is often found in the prevesical space, and the hemorrhage is not annoying. The handle of the sound is now depressed so as to present the other end as a guide for the incision into the bladder, but before the knife is used I will pass two heavy cat-gut sutures through the bladder wall and hold their ends with hæmostats till we need to tie them. It would be more difficult to get the threads in a position with the bladder empty and collapsed. A considerable gush of fluid follows the penetration of the knife, and on inserting my fingers I find four calculi, which you see are hard and have the characteristic appearance of uric acid. The prostate is so much enlarged as almost to tempt me to remove a part of it, but the patient is old and feeble, and I do not feel justified in adding to the necessary shock of operation. Behind the prostate is a pocket in which residual urine has remained and caused so much discomfort and in it I find a fifth calculus.

After thus cleaning out and washing the bladder with boric solution, I sew the margins of the wound up to those of the skin wound with a single suture on each side, preferring this to closing the incision, partly from a desire for the increased security of this method, and partly because his bladder needs now rest and free drainage, both of which can be thus better secured. A double catheter is passed into the viscus so far that its lower end projects down to the pocket behind the prostate; it is held in this position by a silk suture passed through the skin. Iodoform gauze is placed around it and in the wound. A large mat of dressing, perforated for the passage of the tube, is applied over the lower part of the belly, held in place by adhesive strips and a double spica bandage, and the patient put in bed.

[He made a rapid recovery].

The next case is rather obscure, and I am unable to tell you in advance either its exact nature or the method of operation that will be followed. The patient is a man about fifty, who presents enlargements under and apparently attached to the lower jaw bone. On one side the mass is rather soft and small, on the other it is hard and nodular and considerably larger. It is eight months since the trouble was first noticed and in that time the masses have grown so as to interfere with breathing and swallowing, though they are not very prominent externally. The patient has given to one member of the staff an account of syphilis, and has denied all venereal history in his statements to another. It was decided to give him for a time the benefit of the doubt and to treat him upon a tentative diagnosis of syphilis. It must be borne in mind, however, that the venereal history is contradictory and the objective evidences not conclusive. Moreover, the mass has continued to grow in spite of anti-syphilitic treatment and the location is an unusual one for the syphilitic gumma. We must also consider the possibility of the growth being sarcomatous and, for the sake of completeness, we might think of actinomycosis. Such a case is rarely seen in the human being but the patient is a common laborer and he might have been exposed to the fungus. Acting on the supposition that the tumor is a gumma, breaking down in the interior, I have made preparations to open and curette it and to cauterize the walls of the cavity. In this way the patient would be relieved of actual pressure symptoms and with general treatment would probably recover so that the immediate removal of the entire mass would be unnecessary.

The case is at least a lesson to you that an exact diagnosis before the removal and examination of a growth is often extremely difficult, if not sometimes impossible. But I want you to learn an even more important lesson, namely, that in some instances an operator can not tell beforehand just how he will proceed and each step in the operation may depend upon some unexpected development,so that the prudent surgeon must be prepared for emergencies as well as for an anticipated line of action. You see among other instruments in the tray bone-forceps and the chain saw, so that if we have to deal with a malignant growth affecting the maxilla, the operation may not be delayed. These instruments, however, will probably not be needed.

Partly for diagnostic purposes I shall attack the smaller and softer mass first. On opening into it I find that its interior seems to have undergone cystic rather than suppurative degeneration, and this fact throws doubt on the diagnosis of specific trouble. Before attempting to dispose of this growth, I will open into the larger tumor to see if both are of the same nature. This tumor cuts, not like a gumma, but like cartilage and, in spite of its size, I find no breaking down in its center, whereas a gumma of this size would be almost certain to contain a cavity. We must abandon the diagnosis of syphilitic gumma and proceed to eradicate a sarcomatous mass which involves the lower jaw. The precaution of having in readiness the bone-saw and forceps was a wise one, for I shall have to remove a portion of the maxilla between the angle and the symphysis, at least on the side of the larger growth.

[Operation proceeded without difficulty, and the patient's condition was for the time being very much improved. But later a very slow recurrence with infiltration was observed, and further operation was deemed inadvisable. He went to an adjoining alms-house and finally disappeared from observation.]

COMMUNICATIONS.

THE EYE-SYMPTOMS OF BRAIN DISEASE.

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In the last few years quite a number of cases have come under my observation in which the examination of the eyes, especially with the ophthalmoscope, revealed pathological changes of the visual organ which gave the first hints of an affection of the central nervous system and proved of great value in determining the diagnosis of a brain disease. They thus belong to a department of medicine in which the fields of the general practitioner and of the oculist border on each other, and in which both ought to be interested alike.

The reason for the frequent association of ocular affections with those of the brain will at once become apparent if we remember what a very large extent of the latter is placed in relation to the eye. This may advantageously be looked at from four different points of view: *first*, the developmental; *secondly*, the anatomical relation, inasmuch as the optic fibres from the optic foramen to the visual centre are situated within the cranial cavity; *thirdly*, the connection by the ocular, the 'fifth,' the facial and sympathetic nerves; and, *fourthly*, the common causes for associated diseases of both organs.

Consider the eye developmentally, and the retina and optic nerve are to be regarded as a prolongation of the brain. In a very early period of foetal life, when the anterior portion of the medullary tube has been transformed into the three cerebral vesicles, from the foremost of these a new vesicle, the primary ocular, grows out, remaining connected with it by a hollow tube—the first trace of the optic nerve. From the cell-layer covering its pole the lens develops, pushing its wall inwards, so that the hollow sphere is converted into a shell consisting of two layers—the secondary ocular vesicle. Its inner sheath becomes later on the retina and its outer layer the pigment epithelium. In this way the retina and optic nerve are advanced or external parts of the brain. Therefore it seems quite natural that pathological changes in the intracranial portions of the brain, that is in the brain proper, may be propagated to the external parts, that is retina and optic nerve, and that these may show alterations indicating associated or analogous affections of the encephalic parts. The three sheaths of the optic nerve are a direct continuation of the three meninges, the dura mater, arachnoid and pia mater, separated by the subdural and subarachnoidal spaces, which communicate with the identical cerebral spaces. The subdural space of the optic nerve forms in the normal eye only a very narrow fissure, whereas the larger subarachnoidal represents the so called intervaginal space. The spaces are lined with endothelium and are to be considered as lymph-channels of the eye. Schwalbe, Quincke, Deutschmann and Gifford demonstrated that in these spaces there is a lymph current from the brain to the eye.

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We must be familar with these facts in discussing one of the most important ophthalmoscopic symptoms in brain disseases, the optic neuritis usually called choked disc or papillitis. In this disease the optic disc presents the aspect of congestion with œdema, increased redness, blurred edges, radiating striation of whitish nerve fibres spreading into the retina, and sometimes small hemorrhages with general cloudiness. The arteries are concealed at their emergence and narrowed. The veins are dilated, are tortuous, look dark and as if cut into pieces. The swelling of the disc, which in some cases may become so intense that it forms a fungi-form tumor, its sides overhanging the retina, is recognized by the relative displacement of different parts by parallactic movements of the lens, and, in the direct method of ophthalmoscopical examination, by its changed focus in comparison to the retina amounting sometimes to four diopteries. The adjacent portion of the retina may take part in the inflammation and present areas of opacity and hemorrhages. If it extends to the macula, the familiar stellate form of white streaks and dots, as seen in renal disease, appears, caused by a degeneration of the radiating fibres of the fovea centralis.

The *pathological anatomy* of papillitis consists of a swelling of the disc, visible even to the naked eye, rising from two to three millimetres above the level of the choroid. It is caused by dilatation of the blood vessels, œdema, proliferation of nuclei, emigration of leucocytes and hypertrophy of nerve fibres. The nuclei may form a thick layer around the blood vessels and the nerve fibres. The coats of the blood vessels are thickened by nucleated tissue, the nerve fibres show varicose enlargements from an accumulation of fatty globules which are the products of a degeneration of myelin. Sometimes colloid corpuscles are found between them. The nuclear layers of the retina are thickened and the fibres of Müller hypertrophied. The trunk of the optic nerve shows changes of an inflammatory character, sometimes as far back as the chiasm, increase of nuclei, distension of vessels and thickening of its trabeculæ. The sheath is mostly distended, reaching sometimes such a considerable degree that it forms an ampulla close behind the globe. The development of papillitis may take place, in the cases of rapid course, in two to three weeks, remain at its acme two weeks and then subside. This happens mostly when depending upon a cerebral affection of transient, and especially of syphilitic character.

But in other cases optic neuritis may be very chronic; for instance, when caused by a cerebral tumor which progresses very slowly. Then it may last for weeks and months, and then subside and pass into atrophy. The papillitic atrophy is brought about by the shrinking and strangulating influence of the connective tissue into which the newly-formed inflammatory products have been transformed. By its contraction the vessels become narrowed and may be partly concealed. The disc itself assumes a greyish tint, the lamina cribrosa remaining perfectly veiled. Its edge is blurred, although in some cases it may become so sharply defined that it is very difficult to trace the atrophy to its origin.

One of the strangest peculiarities in some cases of papillitis of much marked pathological change, is the integrity of sight, visual field and color perception. In others it is impaired or lost. Pain in the eye is very rare, and if in the head, is due to intracranial affection. The impairment of sight comes on rapidly or slowly, never suddenly. Vision may fail in the course of a few days. The field of vision is affected in various ways. The mechanism by which sight is impaired is very important, especially in regard to the prognosis. In intracranial disease the loss of sight may be caused by the intraocular changes of the papillitis or by an affection of the visual fibres or centres. A sudden blindness in optic neuritis comes on only when associated with mischief farther back in the optic path. The amblyopia caused by the inflammatory process during its acme may nearly disappear as the inflammation subsides, but again be renewed by the subsequent contraction of the connective tissue.

Even after the papillitis is healed with restoration of vision, this may be lost entirely from an affection of the optic fibres within the cranium and without fresh ophthalmoscopic changes. Thus the discrepancy between the affection of sight and the course of papillitis indicates retro-ocular affections. Intracranial diseases are the most common causes,—tumor, meningitis, abscess, hydatid disease and softening of the brain.

Cerebral tumor ranks highest in the etiology of papillitis, which is *the* ocular lesion characteristic of it. According to Gowers, neuritis occurs in about four-fifths of the cases of tumor. Annuske and Reich collected 88 cases with ophthalmoscopic examination and autopsy, and found that in only five per cent. there was no ophthalmoscopic change.

Glioma, sarcoma, tubercle and syphiloma are usually associated with optic neuritis. But this has no peculiar features enabling us to make a diagnosis in regard to the nature, position or size of the tumor, since it was found to be absent in some cases of glioma, which invaded the brain substance only, not increasing its bulk.

The mechanism by which optic neuritis is induced by encephalic disease has been explained by various theories. Von Græfe assumed that the increased intracranial pressure caused an impediment to the return of blood from the eye to the cavernous sinus, thus leading to hyperæmia and dilatation of the central retinal vein. This, however, did not explain the origin of inflammation. In addition, its presumption was not anatomically correct, in that the cavernous sinus is assumed to be the only outlet for the central retinal vein. Sesemann (in 1869) demonstrated that this opens either into the superior ophthalmic vein or directly into the sinus after anastomosing with the superior ophthalmic by large branches. The superior ophthalmic communicates partly with the sinus, but empties by far the greatest portion of its blood through the angular into the anterior facial vein, which will at once relieve the affect of intracranial pressure upon the cavernous sinus.

Manz and Schmidt called attention to the frequently observed distension of the optic sheaths in papillitis, caused by cerebro-spinal fluid forced into the subvaginal space by the intracranial pressure, which might produce papillitis by the compression of the optic nerve and its vessels. In many post-mortem examinations of cases of choked disc however, this distension, or hydrops of the sheaths, was not found at all. Leber, and later Scimemi, attributed to the pathogenic material in this fluid the exciting cause of neuritis. Deutschmann (1887), by recent experimental investigations, came to results in favor of Leber's opinion. He injected agar-agar, stained with india-ink, into the subvaginal space of the rabbits eye, either directly or through the subdural space of the brain. When he proceeded aseptically, he found no choked disc even in those cases in which, after forced injections, the post-mortem examination showed a layer of black agar-agar, one-half to one millimeter thick, covering the whole surface of the brain and so completely filling the subvaginal space that the ophthalmoscope revealed a black ring around the disc. If he injected agar-agar with an infusion of staphylococci into the optic sheath, or tuberculous pus into the cranial cavity, the typical picture of choked disc was obtained. In all these cases inflammatory changes of the papilla existed; never compression of the vessels. He thus comes to the conclusion that, in man, mere increase of pressure does not cause choked disc. This follows only when pathogenic matter, of either chemical or parasitic nature, enters the optic sheath in the cerebro-spinal fluid. In cerebral tumor, the pathogenic material is produced by the metabolism in the tumor. The increase of the intracranial pressure comes only so far into consideration as it favors the entrance of the pathogenic material into the optic vagina. Zellweger (1887) came to the same experimental results with injections of sterilized emulsion of cinnabar. Furstner (1889), from pathological examination, infers that, by changes in the optic sheaths and by the perineuritis which he found, impediments arise to the lymph circulation, especially its outflow, which entail a process of swelling and proliferation and later on destruction of the nervous substance. Benedict ascribed it to the vaso-motor nerves. Hughlings Jackson and Galezowski consider the decending optic neuritis as a propagation of the inflammation of the brain.

From all these observations it seems to be most probable that the papillitis dependent upon intracranial diseases originates in a descending inflammation of the optic nerve, the evidence of which may be traced in the nerve itself and in its sheath, conveyed from diseased portions of the brain into the subvaginal spaces by a powerful lymph-current. The pathogenic material will accumulate mostly at the cul-de-sac of the space next to the globe and therefore produce the most striking changes at the intra-ocular end.

Purulent irido-choroiditis gives another example of the rapid transportation of purulent matter from the cranial cavity through the optic sheaths into the perichoroidal space by means of the lymph-current. The mechanical congestion in choked disc is due to a compression of the vessels by inflammatory products in the substance of the papilla. The intracranial pressure, as well as the distension of the sheath, alone do not cause but may intensify the process. Direct pressure on the optic fibres in the chiasm, at the optic foramen or at the base of the brain, by tumors, internal hydrocephalus, distended third ventricle, meningeal exudations, aneurisms or exostoses of the cranial bones may cause simple atrophy of the optic nerve without preceding papillitis. Blindness, however, may occur in diseases of the brain even without ophthalmoscopic changes.

This brings us to the second point of relation of the eye to the brain—namely, the *anatomical*. In order to get an exact idea of the range of the visual nervous system we have to trace it from its peripheral termination and follow it to its nuclei and centres in the cortex of the brain. It will be readily conceived that we cannot do this anatomically or histologically. It is only possible by a combination of the conclusions obtained by anatomical, pathological, clinical, physiological and experimental researches. The peripheral termini of the visual organ—the cones and rods of the retina—which are excited by their adequate stimulus, the light, are connected with nerve fibres without medullary sheaths, being simple axis-cylinders spreading in the innermost layer of the retina. They all converge in the optic disc where they assume neuroglia and form the trunk of the nerve. In the orbit this, about thirty millimetres long, runs to the optic foramen and meets its partner of the other side in the chiasm.

In regard to the position of the fibres in the optic nerve supplying the different portions of the retina, a case published by Schmidt-Rimpler (*Arch. of Ophth.*, xix., p. 133) gives us valuable information: A man received, from a blow with a spade, a comminuted fracture of the posterior portion of the right parietal bone, a few centimetres below the sagittal suture. Left-sided hemianopia of the right eye resulted. The post-mortem examination revealed constriction of the upper part of the right occipital lobe. The secondary degeneration showed the following distribution of the fibres in the optic nerve: "In the vicinity of the eye, the fibres supplying the macula lie in a wedge-shaped bundle on the temporal side of the nerve; the fibres of the temporal portion on the upper and lower periphery, encroaching somewhat upon the temporal as well as the nasal side; the fibres of the nasal portion in a part embracing the centre of the optic nerve and the middle third of the nasal half of the periphery. In the neighborhood of the optic foramen, the fibres which supply the temporal portion of the retina occupy the lower periphery of the nerve, a larger portion of the nasal and a small, lower one of the temporal periphery; those supplying the nasal portion of the retina occupy especially the upper periphery; whilst the macular fibres are found more in the centre." The assertion of Siemerling that the uncrossed fibres should lie on the lateral side of the nerve seems not proven; nevertheless individual differences are possible.

This way of tracing the visual fibres, granted in this case by nature, was anticipated and experimentally cultivated by Von Gudden as a special method of investigation—the degeneration method or so-called atrophy experiments—and it is due to this mode of research that we owe our chief knowledge of the arrangement of the optic fibres in the chiasm, and of their further course in the brain. His experiments on animals proved a semi-decussation of the fibres in the chiasm in the rabbit, cat and dog, and his studies of horizontal sections of the human chiasm resulted in his observation that the fibres which cross lie mostly in the lower half of the chiasm and those which do not cross in the upper half.

Michel is perhaps the only author who insists on the total crossing in the chiasm in the higher mammals. But his observations are conclusively refuted by the experiments of Singer and Munzer, and, very recently, of Darkschewitsch (*v. Graefe's Arch.*, 37, 1891). Bernheimer (*Arch. of Ophth.*, xx. 1891), following the course of the optic fibres by means of the development of their medullary sheath in thin serial sections of the human chiasm, proved that there are fibres in the upper half of the human chiasm which pass directly from one tract to the nerve of the same side, and that the number of the crossed fibres is considerably greater than the number of the direct ones. From these and other observations we are justified in taking for granted that the fibres of the chiasm intricately interlace, and cross one another so that, of the optic nerve, about three-fifths—representing the fibres from the nasal side of the retina—pass into the opposite tract, and two-fifths—from the temporal half of the retina—enter into the tract of the same side.

According to Siemerling, the uncrossed bundle lies in the centre of the tract and never reaches the periphery. Delbrueck (*Arch. f. Psych.* vol. xxi 1890) says: "In the tract the rule seems to be that the direct fibres are mingled with those that cross." Both tracts diverge backwards and form a rhombus with the cerebral peduncles, pass under these and over the gyrus hippocampi and divide into roots. The lateral root goes to the corpus geniculatum laterale; to the thalamus opticus, especially its posterior portion the pulvinar, and to the anterior corpora quadrigemina. In the latter, commissures of optical fibres of both sides are observed, which Charcot took for the complemental decussation of the fibres not yet crossed; but this theory is unproved. These ganglia are the primary optical centres from which the radiating visual fibres of Gratiolet spread into the white substance and the grey cortex of the occiptial lobe.

The occipital lobe is considered to be the centre of vision, although the exact delimitation of the visual sphere has been a matter of controversy in the investigations of many physiologists. Besides, it is now generally agreed that each species varies somewhat in its functional areas, so that we cannot simply apply physiological results in animals in forming an exact localization of the human function, but they are of great help. Munk first showed that unilateral extirpation of the visual sphere, by a section in the parieto-occipital fissure, localized it exclusively in the occipital lobe and produced homonymous hemianopia from paralysis of the corresponding sides of both retinæ. Ferrier (*Croonian Lectures,* 1890) supposes that Munk's operations for removal of the occipital lobe would be the cause of secondary implication of the angular gyrus or its connections. He thinks, from the results of bilateral destruction of the angular gyrus described by himself, Munk and Schæfer, "that the angular gyri are more particularly related to the area of distinct vision and, accordingly with the maculæ luteæ. The pathological facts in man render it necessary to assume that the region of the yellow spot is represented in the angular gyrus of each hemisphere, though more in that of the opposite side." "It is in the higher visual center, where the two half-vision centres are probably blended, so that the former can compensate its fellow of the other side to some extent, whereas the half vision centres cannot supplement each other." (Gowers.)

The partial defects in the visual field seem to be dependent on partial lesions of the optic radiation and not of the cortex. The hypothesis of Munk and Schæfer, that the different portions of the retina are represented in corresponding regions of the occipital lobe, cannot be considered as a fact. Ewens has, under the direction of Ferrier, collected and analyzed the majority of the recorded cases, with necropsies, of hemianopia, depending on cerebral lesions with implication of other regions. Of 41 cases of hemianopia, 15 were from diseases of the occipito-angular region, 2 of the angular and supramarginal gyri only, 15 from disease of the occipital lobe alone. In the other cases the lesions were of a diffused character, the angular gyrus being implicated in all. Seguin and Nothnagel think that the cuneus, and Wilbrand that the apex of the occipital lobe, have a special relation to visual perception. According to Ferrier the visual area of the cortex is not a merely functionally differentiated region capable of replacing or being replaced by other cortical areas, in as much as destruction of the visual centres leads to atrophy in the primary optic centres, optic tracts and nerves ; and conversely, destruction of the optic radiations leads to atrophy strictly confined to the regions included within the visual zone.

The chief *functional disturbance* in lesions of the visual path from the optic centres down to the chiasm, is homonymous or lateral *hemianopia* of the opposite halves of the visual field, which may be complete or incomplete. The line of division is usually sharp and vertical, and the blind sides usually have no sensation of light. Central vision is often preserved corresponding to a slight projection of the line of separation for three to five degrees into the blind side at the region of the macula. But the defective half never encroaches upon the seeing side beyond the point of fixation, so that this would be situated in the blind portion. The explanation of this was the assumption that the macula of each side receives fibres from each tractus. If this be the case, in lateral hemianopia from a disease of one occipital lobe, destruction of the other occipital lobe would produce absolute blindness through bilateral hemianopia. Foerster, however, observed such a case of bilateral hemianopia. (V. *Graefe's Arch.*, vol. 36, No. 1, p. 94), in which the area of central vision was preserved in both halves of the visual field. He thinks it therefore to be more reasonable to attribute the preservation of central vision to a specially favorable arrangement of blood vessels supplying the sphere of distinct vision in the occipital cortex. Even if by thrombosis of the main vessel supplying the occipital lobe, the nutrition of the cortex in a large extent is cut off, the zone of distinct vision, by the numerous anastomoses of its vessels, receives sufficient nutrient material to preserve its function. Schweigger (*Arch. of Ophth.*, 1891, 1, p. 84) confirms Foerster's hypothesis from the observation of a similar case of bilateral hemianopia with preservation of a limited central field of vision, which he supposes to be due to a particular arrangement in the central apparatus. Foerster infers from his case that the cortex of the occipital lobe is the centre for the sense of locality and the topographical ideation and representation, no matter whether acquired by the visual or tactile organs or the perception of muscular movements, or by description.

If homonymous hemianopia shall be of *localizing value* concomitant symptoms are to be looked for. For distinguishing tract and central hemianopia Wilbrand has suggested the following test advocated by Wernicke and Seguin: If the pupil does not react to light thrown on the hemianopic portion of the retina the optic tract is affected, because the pupillary as well as the visual fibres lie in this path, being connected with the oculo-motor centres by the ganglion habenulæ, the posterior commissure and the nucleus of Von Gudden. The pupillary fibres have a thicker calibre than the visual fibres according to Key, Retzius and Von Gudden. Lesion of the cortical centres causes hemianopia with complete hemiplegia, and aphasia is likely to be caused by a softening of the gyri at the fissure of Sylvius —namely, the inferior parietal lobule, the supramarginal and the angular gyrus. The destruction of the latter, especially in the left hemisphere, is generally associated with the special form of sensory aphasia, word-blindness or *alexia*. The patient sees the words, but cannot read them from a loss of his visual memory of symbols describing objects. In *paraplexia* he reads other words than those which he wants to read. *Dyslexia,* which ought to be called dysanagnosia, was first described by Berlin, in 1883, as a disinclination to read, as if it were impossible to make the necessary mental effort. Such a patient is unable to read to himself or aloud more than four or five words; he then becomes exhausted. Vision may be perfect, and there may be no asthenopia from a refractional error. In six autopsies lesions were found in the left hemisphere, in Broca's region not far from the third frontal convolution.

The other kind of hemianopia, heteronymous hemianopia, embraces those cases in which either both temporal or both nasal halves of the visual field are wanting. Lesions of the central portion or of the anterior or posterior angle of the chiasm causes temporal hemianopia by affecting only the fibres that cross from the nasal half of each retina. Damage to both lateral angles of the chiasm causes nasal or medial hemianopia, by affecting only the non-decussating fibres. The latter is extremely rare. Monocular hemianopia is the consequence of lesion of one nerve in front of the chiasm or at one lateral angle.

EVERY DAY SURGERY.*

'P. O. KEEF, Oconto, Wis.

The surgeon of to-day cannot afford to treat the most trival injury carelessly.

The study of bacteriology shows beyond doubt, that wound infection is due to the presence of pathogenic germs which can be excluded by proper antiseptic precautions. This knowledge is not confined to the profession, but people know enough about blood-poisoning to ask some very embarassing questions when certain symptoms manifest themselves, and if a life or limb is lost the surgeon is liable to be defendant in a suit for malpractice.

It is only by a thorough knowledge of the causes of infection and by the most scrupulous attention to detail that we can do good, clean surgery. The wound or field of operation and everything which may come in contact with it, must be thoroughly sterilized. It is not sufficient to apply a pad of iodoform gauze or other antiseptic dressings over a wound, as they have no power to exert any influence over germs deeply seated—and they need not be very deep either, as the antiseptic must come in actual contact with every germ and remain so for some time to destroy its vitality. I have had a good many incised and lacerated wounds come under my care after they had been dressed elsewhere quite expensively in the matter of antiseptics, but the first and most important point, aseptisizing the part, was neglected or imperfectly done, as underneath the dressings the wounds were freely suppurating.

No doubt those men thought they were doing antiseptic surgery, and will in time either have their eyes opened to the fact that some of the details were lacking, or they will join the rapidly decreasing army of unbelievers.

The abdominal surgeon rarely infects the abdomen, much less should we have infection in our ordinary operations.

The laudable pus of our older teachers is a disgrace to the surgeon of to-day, and the law requires better work of the country doctor of the present time than it did of the city expert of twenty years ago. It seems to me that it ought to be almost impossible for the recent graduate to do unclean surgery, as he is taught so thoroughly by precept and example that he could not think of making or touching a wound without proper preparation. It is different, however, with the older men in the profession. Many of us were planting microbes before antiseptics were ever thought of.

We have to learn the new way and also to break ourselves of old habits, not an easy thing to do. I have been doing what I called antiseptic surgery for about twenty years, but until within about the last five years it was very unsatisfactory. The following report of cases shows the value of thorough asepsis and antisepsis, and that we may now expect to succeed in the most desperate cases.

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*Read before the Wis. State Medical Society, May, 1893.

CASE I. May 25th, 1891. Arthur B.; came to me on account of sore leg. He was terribly emaciated, had frequent chills; temperature 103°; pulse 130. I found tarsus and tibia entirely broken down, knee joint filled with pus, and on amputation between middle and lower end of the thigh, found pus in the medullary cavity. I curetted thoroughly with a sharp spoon and irrigated with 1-1000 sublimate solution, and after introducing a few strands of coarse catgut the whole length of the canal, I closed the wound with sutures leaving the ends of catgut protruding. An antiseptic dressing was applied, not to be removed until indicated by abnormal mal temperature. May 26th, temperature 101°; pulse 130. May 27th, temperature 98½°; pulse 100; eating and sleeping well. Temperature remained normal after this and patient improved rapidly, and on the fourteenth day the dressings were removed and the stump found to be entirely healed. The ends of catgut came off with the dressing, leaving a small granulating spot which healed in a few days. Patient went home three weeks after the amputation perfectly well.

CASE II. Adam H., age 29 years, a Bohemian laborer, called me on June 6th, 1891, on account of an attack of appendicitis. I advised an immediate operation as this was the second attack within four months. He would not consent and I did not see him again until June 13th. He was then in very bad condition. Profuse perspiration; temperature 104°; pulse 140; severe pain in the lower part of abdomen, which was bulging and dull. His bowels had not moved for six days, enemas failing to bring away anything, and there was a constant profuse discharge of colorless glairy mucous from the anus. On the night of June 13th, he came to my hospital for an operation. The next morning his condition seemed much worse. There was uniform distension of the abdomen and patient seemed in a state of collapse. I operated immediately by an incision over the appendix, allowing the escape of gas, pus and feces. The incision was carefully enlarged upwards, the abdomen and pus cavity thoroughly irrigated, first with hot sterilized water then with a 1-3000 sublimate solution, followed again by irrigation with a large quantity of hot sterilized water. On examination I now found that the appendix had sloughed off and from this perforation the cæcum was torn allowing pus and feces to enter the peritoneal cavity. I sutured the edges of the torn intestine to the parietal wound and introduced a large and a small drainage tube to the bottom of the abscess cavity. The patient was now placed in bed and surrounded with bottles of hot water. Reaction was very slow. The cavity was irrigated with hot Thiersh's solution every six hours and it was not until the fourth day that any sign of improvement took place. He then commenced to gain and on June 29th, the abscess cavity was obliterated and I attempted to close the fecal fistula by paring the edges and suturing. The attempt failed as did several other attempts that I made. During the next three months I tried all the schemes I could think of, but each time after a few hours he would have severe pain and the fistula would burst open. I now proposed to unite the ilium with the colon to which he readily consented, and on October 12th, I made a median incision below the umbilicus and made an anastomoses of the lower end of the ilium and the descending colon by means of Senn's decalcified bone plates. The bowels moved naturally the next morning for the first time since his sickness began, and the fistula healed without any treatment except his wearing a pad of borated cotton pressed against it. I did not look for the site or cause of obstruction of the colon because just after making the abdominal incision as I was lifting out the intestine the patient became asphyxiated and I had to complete the operation as soon as possible. On account of the ilium opening so low in the colon I expected that the feces would be fluid, but I have asked the man about it a number of times since, and he says he is all right and as well as ever.

CASE III. On June 27th, 1891, Thomas H., age six years, while playing in the barn fell with his knee on a scythe splitting the patella longitudinally from the center slanting outwards, so that it cut off about one-fourth inch of the articular surface and opened the capsule of the joint to the extent of one and one-half inches. The joint was filled with blood and hay seed and in order to properly irrigate I removed the smaller piece of patella and cleaned the joint thoroughly. The capsule and deep tissues were sutured closely with fine catgut and the skin with silk sutures. A plaster of Paris cast was applied over the antiseptic dressing and left on for eight days. When removed the wound was entirely healed and passive motion made, which was slightly painful at first, but in a few days he began to walk with as good a joint as before.

CASE IV. On September 27th, 1892, Mrs. C. G., age 28 years, was sent to me by Dr. Brett, of Green Bay. She began to have severe pain in the left side, in February, accompanied with chills and fever. When I first saw her she had lost seventy-five pounds in weight in seven months. She was still suffering severe pain and had slight chills. Her temperature was 101°, and remained so until I operated on September 29th. Dr. Phillips, of Menominee, who was present saw her at the Providence Hospital in Menominee about three months before, and said he could by pressure reduce the size of the tumor, by forcing the pus through the tubes into the uterus. An incision was made along the linea alba and the tumor found firmly adherent. It was carefully enucleated. During the operation a few drops of pus appeared to ooze from the tumor where a firm adhesion had been broken up, and I packed the abdomen with sterilized gauze in case of possible rupture. The remaining adhesions were broken up and the tumor successfully removed. The pedicle and all bleeding points were ligated and cauterized, and a large rubber drainage tube with a wick of iodoform gauze placed in Douglass' pouch and the abdominal wound closed. Two hours after the operation I gave $\frac{1}{8}$ gr. morphia which was the only dose required. Temperature in the evening was 100½°. Next day, September 30th, temperature 100°. October 1st, temperature 98½°. I removed drainage tube. The temperature remained normal after that and abdominal wound healed by first intention, except site of drainage tube which healed in a short time by granulation.

During her four weeks stay at the hospital, patient had gained twenty-two pounds in weight and has been well since. The tumor was between four and five inches in diametre, consisting of one large thin-walled cyst filled with intensely foul smelling pus, and a few small cysts filled with a transparent gelatinous fluid. The fimbriated extremity was firmly adherent to the tumor, but the tube itself was somewhat thickened but contained no pus. I do not report this case on account of its peculiarities but because one of the physicians present, quite a prominent surgeon, is reported to have said afterwards that the operation was uncalled for and that the patient could have been cured by other means. Now, if an operation is not called for in such cases as this—when should we operate?

CASE V. Nov. 16, 1892, I was called to Gillett to see R. K., who on the evening previous received four bullet wounds from a 38 caliber revolver, in various parts of the body. One of them entered the abdominal cavity by passing through the left ileum about its center. It passed upwards and forwards and lodged in the left rectus. On cutting down on the bullet a few bubbles of gas escaped so the incision into the abdomen was completed and the intestines examined.

At one point in the small intestine there was some discoloration of the mesentery, and one side of the intestine had lost its glistening appearance. The descending colon was perforated and cut nearly half off, except a narrow bridge about ¼ inch wide between the two bullet holes. The mucus membrane was everted so that it completely filled both openings, preventing almost absolutely the escape of fecal matter, and I failed to force any out by pressure on the bowel until I cut the narrow bridge; thus nature had quite effectively protected the peritoneum and there was no hemorrhage to speak of. The wounded colon was repaired with a large number of Czerny—Lembert sutures. The peritoneal cavity was thoroughly irrigated and the abdominal wound closed. I left him 1½ hours after the operation feeling well and he continued so until about noon on Nov. 18th, sixty-fours after the shooting; he became restless; his temperature, which had been 99° to 99½° fell to 96½°, the abdomen began to swell and became tympanitic. I saw him about 3 P. M. and he was in a state of collapse. I supposed the sutures had given away.

He died about 10 P. M. just seventy-two hours after the shooting. Autopsy was made eighteen hours after death by Dr. Hinch, of Gillett, who kindly sent me sections of bowel. The sutured colon was perfectly united, but in the small intestine were found three small perforations about ⅛ inch in diameter—two on one side of the bowel about ½ inch apart, and one on the other side directly opposite to them. I made a post mortem diagnosis of embolism of a mesenteric artery and necrosis of the corresponding part of intestine, probably the part found discolored at the time of operation. I think in all cases where the mesentery is injured, the only safe plan is to remove a V shaped portion of the intestine and unite by anastomosis or other means. It may be that many of the deaths after gun-shot wound are due to slight injury to the intestine or mesentery which is either not seen or thought not to be of any consequence, instead of failure of the part operated upon to unite.

If a post-mortem had not been made in this case I would still think as I did when I saw him the last time alive, that the sutures had given away.

FOREIGN SUBSTANCE IN THE EAR FOR THIRTY YEARS.

C. C. MOORE, M. D., PHILADELPHIA.

In March, 1892, F. L., æt. 73 years, came to my office for a troublesome winter cough so severe he could not rest at night. He had not laid down for some months, but slept in the upright position. This cough had been increasing for several winters and was apparently a case of chronic winter bronchitis of old age. He had not consulted any other physician though the coughing had been severe for some time. Objectively he was a large, strong man; respiratory sounds negative, pharynx red, congested from constant coughing, but I could detect no cause for it. Nares clear and mucous healthy. I clearly had a case of reflex cough. I looked in the left ear and it was normal in every way. He protested his hearing was perfect. I put the ear speculum aside, then thought I would complete the examination and look in the right ear, where a large piece cerumen that filled the canal was discovered. I removed it with the syringe and warm water. This revived his memory and he told me that thirty years ago, while driving along a woods, some insect flew in his ear. It annoyed him for about an hour, then suddenly quit; he gave this no more attention, but always thought his hearing was somewhat impaired on that side. Removing this substance cured his cough completely, for more than a year has lapsed since. In the centre of the cerumen was a grain of sand the size of a bird shot. This had formed the nucleus for cerumen. It had probably been thrown from the carriage wheel, and caused the sensation like the buzzing of an insect.

I consider the case exceptional, and it proves how misleading a symptom may be and that we can not always treat the symptoms. A cough, like a headache or neuralgia or pain, may be caused by disease remote from the locality of the annoying symptom.

The Justifiable Prevention of Conception.

The physician not infrequently has to warn against conception in cases where a pregnancy would endanger the life or the health of the patient. Pelvic contraction, abdominal and uterine tumors, etc., form such an indication. The advice to abstain from coitus is but seldom followed, and the means usually employed to prevent gestation (mechanical) are objectionable from a hygienic and ethical point of view. Kleinwächter has endeavored to find a remedy which would have none of the aforementioned drawbacks. He prescribes a cacao-butter suppository containing 10 per cent. of boracic acid, to be introduced high up into the vagina. These suppositories dissolve in about one hour, and the liberated acid destroys the spermatozoa. Bichloride of mercury in 0.001-gramme doses can also be used, but in that case a vaginal douche has to follow the sexual act. The solvency of the suppository is heightened by adding one grain of oleum olivæ. The author considers this a safe and sure remedy to prevent conception. Therapeutic effects may be combined by the adding of various drugs—for instance, tannin in cases of uterine catarrh.—*Medical Age.*

SOCIETY REPORTS.

THE SURGICAL SOCIETY OF LOUISVILLE.

Stated Meeting, May 8th, 1893.

THE PRESIDENT, DR. A. M. CARTLEDGE, in the Chair.

FATTY TUMOR.

DR. W. O. ROBERTS: This specimen is a fatty tumor which in itself does not amount to much, but the location from which it was taken makes it rather interesting. The patient was fifty-five years of age, and the tumor was first noticed three years ago; it was then quite small and was thought to be an enlarged gland in the carotid triangle of the neck. It has grown gradually. At the time of its removal, ten days ago, it had attained a considerable size and produced a good deal of discomfort from pressure upon the structures of the neck. It is the first time I have ever seen a fatty tumor in this locality, and for that reason I report the case. Hemorrhage, which would have been considerable, was controlled with clamp forceps. I was assisted in the operation by Drs. Joe Anderson, Beard and Block.

DISCUSSION.

DR. E. R. PALMER: Did the tumor have any effect on the breathing?

DR. W. O. ROBERTS: It had begun to do so.

The essay of the evening was then read by Dr. E. R. Palmer.

CARE OF THE UPPER AIR PASSAGES IN THE TREATMENT OF SYPHILIS.

Contrary to a quite common belief and mode of procedure, the scientific treatment of syphilis is anything but simple or stereotyped. Attention to what at first seem but little things constitute a very important part of the surgeon's duty. He has a great deal more to do than to simply order two years or more of constitutional treatment with a cessation from tobacco and alcohol. Among the other duties that devolve upon him, are frequent inspection of the nose, mouth and pharynx. The mere casual search for mucous patches in the latter two will not suffice. On taking charge of the case, he should familiarize himself fully with the pre-syphilitic topography of these parts. In so doing it will be a matter of surprise how frequently their condition is found to be a vicious one. Notably is this the case as regards the mouth. Scurvy, snags, or a general foul and so insanitary condition being frequently present, calling for correction. When possible, each patient, unless the mouth be found in an excellent state, should be sent at once to a competent dentist to have his teeth cleansed, filled, etc., and he should be ordered not only a good dentifrice with a soft brush and pure castile soap for daily use, but from time to time when any specific evidences appear, a mouth wash of listerine, zymocide or the like used, if possible, in full strength.

Enlarged or chronically diseased tonsils should be removed, and chronic non-specific catarrhal conditions of the pharynx being common, these parts must be brought into the best possible conditions by local and constitutional treatment. But of vastly more importance is the care of the nares. It is reprehensible in the extreme to wait until bloody discharges or bits of exfoliating turbinated bone tell the story of probably irreparable damage.

It must not be overlooked that while destructive, and so incurable, phases of syphilis usually attack the nares late in syphilis, they are also usually preceded by early and curable troubles that lay the foundation, when overlooked, for the final damage.

One object I had in calling your attention to this matter to-night is to urge in such cases, both as an exploratory and as a curative measure, the use, with a post-nasal syringe, of a combination in equal parts of Dobell's solution and 15 vol. peroxide of hydrogen. When trouble exists, the discharge of, sometimes, enormous quantities of decomposed muco-pus follows with a great sense of relief and comfort on the part of the patient. Pain is rarely experienced, and where it is, a one per cent. solution of cocaine snuffed from the hollow of the hand suffices for its relief.

While I do not urge this as a *one* remedy in nasal syphilis, I desire to add it as an important combination to the list already recorded. Gummata of the hard palate are usually of a tertiary character. I have recently relieved two such cases without perforation by heroic mercurialization and the application of saturated solution of silver nitrate daily — better results than are obtained usually by the mixed or pure iodide treatment.

A case recently under my care illustrates the necessity of close observation in upper air passage complications. An actress, leading lady of a prominent combination, came to see me with acute aphonia. She was greatly distressed, as she stated a surgeon of Johns Hopkins Hospital had told her her disease was syphilitic in character. She was vehement in her assertions that she had never had syphilis. On examination of her mouth I discovered an enlargement, median of the hard palate, gumma as large as an ordinary grape. I sent her to see Dr. Cheatham, who found no evidence of syphilis in her throat and soon relieved her. I saw her daily for about two weeks as also did Dr. Cheatham, and it was not long before we diagnosed the elevation to be a congenital deformity. The patient has since remained wholly well.

The other doctor diagnosed syphilis, probably, from the supposed gumma, not having made, as I learned, a laryngoscopic examination.

DISCUSSION.

Dr. W. O. Roberts: In regard to peroxide of hydrogen in the nasal douche, I tried this on two cases and it produced such discomfort that I had to stop it. However, in these cases I used Marchand's peroxide of hydrogen. I have since used the Oakland Company's, which did not produce any of these disagreeable effects. I would like to ask Dr. Palmer if he does not think the douche would answer the same purpose as the post nasal syringe? I rely chiefly in the management of these cases upon constitutional treatment.

Dr. E. R. Palmer: The thing is to get them to use it. In cases of early syphilis, I have removed from the nostrils sometimes a double handful of muco-purulent material by throwing the syringe twice full up over the velum palati. I have never seen any inflammatory trouble follow use of the syringe. I use the O.C. peroxide solely.

Dr. Wm. Cheatham: I remember the case Dr. Palmer refers to very well. I did not believe it was a node or gumma. I saw an article a short time afterward where a gentleman reported a lot of these congenital projections.

I think Dr. Palmer's solution of peroxide a little strong; it is liable to be forced into the middle ear and up into the sinuses. I think he will find that a 2 or 3 volume, will do just as much good and is much safer. Another precaution I would like to call Dr. Palmer's attention to, is that of blowing; if you have the patient blow, some of the secretion or solution is very liable to get into the middle ear. Always after using spray, douche or post nasal syringe, let them draw it down instead of blow, thus avoiding danger to the ear.

Dr. Roberts asked about the douche. No anterior treatment reaches more than two-thirds of the nose. Where a solution is used anteriorly, either with spray or douche, it does not reach over the turbinates, but if you use it posteriorly it does. Men write a great deal about syphilis of the upper air passages, I do not think I I have but one case now; syphilis shows about one-third the way back in the right nose in this case, which I have relieved by chromic acid. I think it was gumma; had primary lesion four or five years ago. In late syphilis I find cod liver oil very beneficial.

Dr. A. M. Cartledge: I suppose my experience is like that of most other physicians; I find some cases recover very promptly under treatment while others are very obstinate. I formerly used nitrate of silver nearly altogether. In the last year or so I have been using gargles or mouth washes of mercury bichloride, using it as part of the treatment. I think bichloride wash, just as a sanitary measure, is a good thing. Many of these cases demand other things than iodide of potassium; as a rule I think we neglect the general building up of these people too much. I believe, in the late manifestations of syphilis, quinine, cinchona, cod liver oil, etc., may be given with excellent results.

Dr. E. R. Palmer: I am surprised that Taylor, in his work in Hare's System, objects to the use of the black wash in syphilitic troubles. He says that in private practice it nauseates his patients, but in the Vanderbilt Clinic he gets very fine results from it. I think a great deal of the black wash and advise its use in suitable cases. It was more to call attention to the matter of mouth hygiene than anything else that I prepared the short paper read this evening.

In the matter of cod liver oil—as most of you know, I taught lung diseases for sixteen years, and I believe that benefit may be derived from the administration of cod liver oil vastly more in late syphilis than in phthisis. I prescribe it nearly every day; there are three or four favorite preparations among the emulsions and I give them, feeling absolutely certain that beneficial results will follow. My faith has very materially weakened in regard to the iodides; I do not get results from them such as I would like or would expect, considering the reputation they have had.

I want to mention two other cases in addition to those referred to in the paper, where I have recently relieved gummata of the hard palate by the administration of three to five grains of proto-iodide daily and daily application of nitrate of silver; both cases were completely cured without any destruction of the bone. One of the patients was a terrible acne subject; had been to Hot Springs twice; he could not take iodide of potassium without its producing very distressing conditions, tumefaction, tormina and all the other disagreeable symptoms. I gave him cod liver oil and he was then able to take the treatment without any trouble.

The next case was double infection. While he was being treated for tertiary syphilis, contracted in 1885, he got a fresh case. While under treatment for this new syphilis, he developed a gumma of the hard palate. He was given four or five grains of proto-iodide daily and, with the application of silver nitrate, got entirely well. I do not give iodide of potassium in conjunction with cod liver oil. I think iodide should be used singly, but my results in its use are not very encouraging except in brain and bone syphilis. In such cases iodide is indicated sometimes to the Hot Springs extreme, 120 grains three times a day or even more will be found very beneficial.

Dr. Wm. Cheatham: I would like to call attention to the fact that in some severe cases of secondary syphilis of the tonsils, pharynx and inside of cheeks, constitutional treatment appears to have but little effect, until the above lesions are relieved by local treatment. I use in such cases the "black wash" or hydrogen peroxide (Oakland Co.) 10 vol., six ounces; glycerine two ounces; hydrarg. bichloride one grain locally. I do not know how to explain this, but I know it to be a fact.

Dr. H. H. Grant: I would like to ask Dr. Palmer if he uses mercury hypodermatically in the treatment of syphilis.

Dr. E. R. Palmer: I have never employed mercury hypodermatically. I think injections might be used simply for their local effect. For instance, some men inject gummata and nodes in the treatment of syphilis with view of getting the local effect of the agent. It has never become a part of the treatment in this country. It is exceedingly painful and has not done the work it was claimed it would do. I think this is the reason why the hypodermatic use of mercury has not become more general. It was claimed that by this means in a three months' course of injection, syphilis could be eradicated from the system. I do not believe this will ever be the case; you must treat your patient over a considerable period of time, no matter what agent you use or the manner of introduction.

Dr. H. H. Grant: Do you not think that the good effect derived from the administration of cod liver oil is owing to its constructive powers, aiding the constitution to avert or overcome the tertiary manifestations, thus rendering iodide unnecessary?

Dr. E. R. Palmer: I do not see how we can well explain the wonderful results obtained by the use of cod liver oil. I hardly think it can be explained by the small amount of iodine it contains.

Dr. A. M. Cartledge: Do you not think that mercury when applied to the local manifestation of syphilis, has a local specific effect?

Dr. E. R. Palmer: Unquestionably it has. The action of mercury is as a solvent of the neoplasm, and this is where I would favor injection, in pronounced lesions, of the gummata to get the local effect of the mercury. The point I wished particularly to emphasize, is the care of the mouth; that it is not sufficient to look into the mouth for mucous patches, etc. You would be surprised at the number of people that present themselves with the most horrible mouths. Scurvy is a very common condition; teeth loose, breath foul, gums bleeding and all those other conditions that make the mouth look more like a cess-pool than the sweet, clean organ that it should be. Another point I want to emphasize is that the physician should familiarize himself with the presyphilitic topography of the case.

In the case of the actress with the growth in her mouth; if the mouth had been carefully examined previously she would have been familiar with the true nature of the trouble there. She was not even able to tell how long this growth had been present.

In this connection I would like to mention that I saw to-day a lady who had the change of life ten years ago, a wonderfully well-preserved woman, with the two tonsils as large as you will see in very much younger subjects; two immense tonsils almost meeting in the pharynx. I was laboring under the impression that the tonsil atrophied in old patients.

Dr. Wm. Cheatham: Such conditions are not common.

CONTINUED REPORT—(PARTIAL THYROIDECTOMY).

Dr. A. M. Vance: I would like to make a continued report: At the last meeting of this society I presented a specimen consisting of a portion of thyroid gland removed a few days previously. At that time I read a letter from Dr. Louis Frank, written me after he had made a careful microscopical examination of the growth, in which he pronounced it thyroid gland. You will remember at that time there was some doubt expressed by one or two members as to the nature of the tumor, that is whether it was really thyroid tissue. I have since had it examined by several other microscopists and they all agree with the report made by Dr. Frank. I will read their several letters, also a short report from the *New York Medical Journal,* and a quotation from the *American Text Book of Surgery*, bearing on the question.

"PARATHYROID GLANDS IN MAN."

"At a meeting of the Paris Medical Society of the Hospitals, held on March 17th, reported in the *Union Medicale* for March 21st, Dr. Chantemesse and Dr. Marie described some little glandular organs found in the neighborhood of the thyroid gland in man, and confirmed Sanderström's description of parathyreoid glands. They form two groups, one of which, the more important, is situated at the level of the point of penetration of the inferior thyroid artery. This group consists of two or three glandules, none of them larger than a lentil, round, ovoid, or kidney shaped. The other group, generally less voluminous, is at the level of the point of penetration of the superior thyroid artery. These little glands are free or surrounded with connective tissue and provided with a minute vascular pedicle. Their structure is very different from that of lymphatic ganglia. They are divided into lobules by a connective tissue stroma, and are traversed by numerous capillary vessels. The lobules are formed of little cells sometimes disposed irregularly, sometimes arranged in a circle, the periphery of which is bordered with little cubical cells, and the centre filled with irregularly disposed elements. Occasionally, true tubes of epithelial cells may be made out, and at the periphery of the glands there are often to be seen little rounded masses, the central part of which contains a material having a colloid appearance. Stress was laid on the fact that these glandules were situated externally to the capsule of the thyroid gland, and it was urged that they be left in cases of thyroidectomy, for they were capable of a compensatory function analogous to that of the pituitary gland."—(*N. Y. Medical Journal*, April 15th, 1893.)

"The body is quite likely to be accompanied by accessory masses of similar tissue, which may be connected with it or may lie behind the trachea, or beneath the base of the tongue, or elsewhere about the middle or anterior portions."—(*The American Text Book of Surgery.*)

"**Dr. A. M. Vance**: I agree with Dr. Frank's statement, having made a microscopic examination of tissue and would like to add that I believe it to be not only thyroid gland tissue but a goitre."

Dr. Wm. Vissman."

"My Dear Doctor Vance: "I was requested by Dr. Rodman to examine a piece of tissue unaccompanied by clinical history, etc. I did so and after examining ten or twelve sections reported it as thyroid tissue. I presume this is the same tissue examined by Drs. Frank and Vissman and if so, I concur in their diagnosis." Respt.

H. M. Goodman, M. D."

"My Dear Doctor Vance: "At the request of Dr. Goodman, I examined a section of the tissues above described, and found it to present all the characteristics of thyroid tissue."

Yours very truly,
H. A. Cottell, M. D."

"Dear Doctor Vance: "Macroscopically and microscopically I think the tissue sent me by you to be a thyroid gland."

Respt.
Jno. L. Howard, M. D."

"Dear Doctor: Just coming home I found your note requesting me to give you my statement in regard to the specimen examined for Dr. Rodman and I gladly do so, as I have done at the time to him. The piece of tissue handed to me by Dr. Rodman was partly dried at the outer surface and consisted of two sorts of tissue to the naked eye, one grayish and glistening, the other a small nodule at the periphery, a yellowish white firmer tissue.

Microscopic examination shows the tissue to be made up of gland-acini, varying in size from $\frac{1}{25}$ to $\frac{1}{500}$ inch, irregular in outline, separated from one another by a delicate fibrous wall, and lined with roundish nucleated cells somewhat larger than the ordinary lymph corpuscles. In some of the larger acini, the lining cells are flattened by compression of a clear homogenous refractive substance filling the acini (colloid material), some few of the acini are filled with an organized tissue made up of a delicate connective tissue, some others have a yellowish brown pigment lying within the colloid material.

The mentioned yellowish white portion is made up of densely packed alveoli which are filled partly with colloid material but the majority with densely crowded cells of the same type as those lining the wall. The stroma is supplied with a moderate amount of small blood vessels.

As to "the resume"—I have not the least hesitation or the slightest doubt to state, as I have done to my friend Dr. Rodman, that the specimen in question is a piece of thyroid gland in a state of (very common in this structure) colloid degeneration, or as you find it named by German pathologists Struma Colloides.

Hoping to have served you by this report"

I am sincerely your friend,
C. Weidner."

Dr. Frank has made several sections of the growth, which I have had him bring here this evening and would be glad to have you examine them through the microscope, also compare them with other specimens of thyroid tissue.

Dr. W. L. Rodman: I wish to add a word in regard to Dr. Weidner's opinion: Dr. Vance was kind enough to give me a portion of the specimen; I had it in my buggy and in driving down town met Dr. Weidner, who said he would be very glad to examine it. He made an examination and made the same report to me verbally that he has in writing to Dr. Vance. I take pleasure in stating that Dr. Weidner further said he was not certain, but the point in the section he made there seemed to be cells of a sarcomatous nature. I do not mean to quote the doctor as saying that it was necessarily sarcomatous degeneration of the thyroid, but he found cells looking very much like sarcoma cells. I stated at the last meeting that if this was thyroid tissue, I was satisfied that it was an accessory thyroid that occurs occasionally at different points in the neck, sometimes inside the larynx and trachea, and when they do occur, they are subject to the same enlargements as the thyroid-cystic degeneration and fibrous bronchocele.

From the unanimity of the report made by the microscopists, I am satisfied that this must be thyroid tissue. I am still under the impression, however, that it is an enlarged accessory thyroid, as the isthmus is very infrequently the seat of goitre, it nearly always affecting one of the two lobes, preferably the right. Hypertrophy of the isthmus is very infrequent. In a paper that I am now preparing, which will be read at the next meeting of the Kentucky State Medical Society next Thursday morning, I take up diseases of the thyroid as well as other tumors of the neck. I have gone over the literature very carefully, and am, therefore, in position to speak advisedly upon the subject. Benign solid growths practically do not affect the thyroid gland, the only one being the fibrous bronchocele or hypertrophy of the gland. Cystic degeneration is frequent. As to malignant growths: Kaufman, in an elaborate paper on the subject, was able to collect only 21 cases of carcinoma affecting the thyroid, and 7 cases of sarcoma. So I think I was right in stating that benign growths of the thyroid are practically unknown, and that malignant growths are verv rarely found, so rarely that I doubt if any member present has ever seen one.

Dr. Louis Frank (Visiting): I was asked by Dr. Vance to bring some sections (of the specimen handed me by him) here to-night to demonstrate the correctness of my diagnosis. His report from the other microscopists of the city was entirely unsolicited by me. I intend to stand on the report I have already made. Some one has mentioned the short time consumed by me in making an examination of this tumor. I will state that, as the specimen was fresh, no time was required further than to make a few sections of the growth and mount them for examination, probably ten or fifteen minutes.

Possibly I misunderstood Dr. Rodman in saying that non-malignant growths of the thyroid were very infrequent; from my reading (and I have looked over two or three books on pathology since this tumor was sent to me), I find that cystic growths of the thyroid, what we ordinarily term struma, are quite common. I agree with Dr. Rodman that malignant growths of the thyroid are very rare, comparatively few cases being on record. Benign growths, though, are very frequent, being either of the cystic variety or being fibroid in character; the latter variety being usually a result of changes following hemorrhage of the cystic tumors.

Dr. H. M. Goodman (Visiting): I have very little to add to the foregoing remarks, except to define my position in connection with the examination of the specimen. I worked under very adverse circumstances. I knew nothing about the case; a piece of tissue being handed me by one of my colleagues at the University with the request that I examine and report upon it. I remarked at the time that it was a very difficult thing to do in the absence of any clinical history, but as the tissue seemed to be tolerably hard and firm I immediately embedded it in colloidin, and made a few sections and proceeded to examine it. The first section showed thyroid tissue with increasing amount of colloid material in the sacs of the tissue. I am glad, for once, the microoscopists of the city seem to be agreed, and certainly I think the diagnosis is absolutely settled. I will add, however, that in sending the report to Dr. Rodman, I made the diagnosis of colloid struma.

Dr. Louis Frank: I would also like to say that it is only by microscopical examination that we are able to recognize certain tissue macroscopically. It is the microscope that renders us able to know certain tissues, and that has by analyzing structures enabled us to say what they are when we next see them. Were it not for the microscope we would never be able to recognize carcinoma or any other growths macroscopically.

Concerning the point made by Dr. Goodman in regard to the clinical history: The specimen was handed to me with no history whatever, except that the tumor was removed from the neck, consequently the question of clinical history did not figure in my diagnosis. You cannot always rely upon the clinical history for diagnosis.

RIB RESECTION FOR EMPYEMA.

Dr. W. O. Roberts: I will report a case I operated upon at the University Clinic last Tuesday morning. A man, thirty-five years of age, sixteen years ago had what was said to be pneumonia of the right side; had never been well since. Five years ago, a large swelling appeared just above the edge of the cartilage on the right side and it was finally opened, discharging very profusely and has been discharging freely every since. Upon examination, I found the left side of the chest enlarged and the right side perfectly flat and dull clear up to the point of the scapula. I made an incision down to the seventh rib on a line with the posterior diameter of the axillary space, found the ribs so close together that I could not get anything between them. I then resected a portion of the seventh rib, removing a piece probably about two inches in length. I then opened the chest and I think the foulest pus that I have ever smelled in my life came out. There must have been at least a pint of it, if not more. I inserted a large drainage tube without washing out the chest, emptying it as thoroughly as I could by changing the position of the patient, and sent him to the Sts. Mary and Elizabeth Hospital. He has gotten along without an untoward symptom and now the original opening is almost entirely closed. Nothing comes out of it.

I report the case as being of interest because of the fact that this condition of empyema has lasted such a length of time. He dates it back sixteen years; has never been able to breath well on that side since the attack of pneumonia.

DISCUSSION.

Dr. A. M. Vance: I would like to ask Dr. Roberts why he did not wash out the chest?

Dr. W. O. Roberts: Because of the fact that a number of sudden deaths have resulted from washing out the sac in cases of pyema, especially cases where the empyema was on the left side.

Dr. A. M. Cartledge: I hope a continued report will be made of this case, I do not think the man will get well. A lung compressed by an accumulation of pus for sixteen years will not get well as a rule with the resection of 1½ to 2 inches of rib. The case is of such long standing, there is evidently a quantity of old fibrous tissue existing, and I do not believe there will be sufficient lung expansion to fill the cavity. I think there will be a discharging sinus requiring a more extensive operation. That has been my experience. The lung will not expand, and you will have to take out a section of two or three ribs, and break up adhesions that bind the lung down

Dr. W. O. Roberts: This is the second case I have had where this offensive pus existed; both of them were operated upon at the University Clinic. The first case was several years ago. The man had been shot, the ball entering the upper part of the right side of the chest, between the third and fourth ribs, and had been discharging for something over a year; whenever he would lie down the pus would run out through the opening. I removed a section of the seventh rib and such offensive pus escaped that almost all the students left the lecture room. Referring to what Dr. Cartledge has said about the case just reported: I made the same remark at the time of the operation. However, I thought it was best to try it with the resection of one rib, and if I failed to get closure, then do the operation he refers to.

I saw in Edinburgh, in 1886, a case that had been operated upon by Annandale for empyema which had existed for years, and it seemed to me that he removed the greater part of one side of the thorax. He made an incision very low down and removed fully four inches of the tenth rib, a little less of the next and so on until the apex reached about the third rib. He told me he had operated on several cases in that way and had gotten excellent results.

Dr. A. M. Cartledge: Do you not think the odor, where the empyema has been the result of original pneumonia, is because of the fact that air has been introduced from the lung? I have seen several cases of this kind.

Dr. W. O. Roberts: I am satisfied that there was communication with the lung in this case. Before the operation this man expectorated large quantities of pus that looked tuberculous in character. I am very sorry that I did not have a microscopical examination made of it before this meeting. Since operation, expectoration has diminished very much.

One peculiarity about this patient is that he has the most marked "club fingers" that I ever saw.

EMPYEMA—RESECTION OF RIB WITHOUT ANÆSTHESIA.

Dr. A. M. Vance: I would like to mention a case of empyema that I saw the other day. I was called by Drs. Rudell and Evans to see a little boy who had been sick for five weeks, beginning with pneumonia and ending up with what was supposed to be pleurisy of large proportions. He remained on his right side with the arm extended above his head; had been in this condition for about two weeks and unable to breathe comfortably in any other position. He was unable to turn over and all the windows had to be kept open in order that he might get sufficient air. We first gave him some whiskey and a hypodermic injection of nitro-glycerine, which improved his forces a little, and I found the whole right lung dull. I inserted an aspirator needle and drew off about an ounce of pus, then the needle became obstructed. I then determined to open the chest without any anæsthesia. I made an incision fully three inches long and inserted two large size drainage tubes; about a gallon of pus escaped, much of it being caseous in nature. As soon as about half of the pus was removed, the boy became very cheery and seemed much better.

The point of interest in the case is that the prolonged pressure seemed to have produced complete anæsthesia of the whole side. I would have washed out the cavity, had it not been for the fact that the boy was so much exhausted that I could not.

DISCUSSION.

Dr. A. M. Cartledge: I do not think we are justified in taking the additional risk in washing out the chest in these cases. In the first place, you have a large purulent sac that cannot be thoroughly cleansed by irrigation, and I think the attempt is attended with danger. If it were possible to render this whole surface aseptic, then we might afford to take the additional risk. No matter how thoroughly you empty an empyema sac, when the dressings are changed you will find them saturated with pus. I believe the best plan is to introduce the shortest drainage tube that will reach the cavity, not attemping to get to the bottom, then apply an antiseptic dressing and let the drainage take care of itself. In my opinion we will shortly have an entirely new pathology of empyema. Pleuritic effusion becoming purulent, simply means the introduction of infection through the lung; that most of these cases of pleuritic effusion follow as a result of pneumonia is beyond question. It is a well known fact that in the tuberculous variety, no mattter what means of drainage you employ, the patient usually dies.

Don't Pick them Green.

Statistics are said to show that young men do not, on the average, attain full physical maturity until they arrive at the age of twenty-eight years. Prof. Scheiller, of Harvard, asserts, as a result of his observations, that young men do not attain to the full measure of their mental faculties before twenty-five years of age. Better say thirty. A shrewd observer has said that "most men are boys until they are thirty, and little boys until they are twenty-five"; and this accords with the standard of manhood which was fixed at thirty among the ancient Hebrews and other races. A remedy is needed for the progress and propagation of puerility.—*Exchange.*

It is hard to feel at home with people who never make mistakes.

Dr. Klein, the distinguished lecturer on physiology at St. Bartholomew's, has announced that science is enriched by a medical discovery as important in the domain of therapeutics as chloroform, laudanum and quinine. The great theory of infection by bacillus forms requires, in order to be fruitful of benefits to mankind, the discovery of a powerful germicide. In carbolic acid, in corrosive sublimate and in potassium permanganate, science has made long strides in the direction of adequate antiseptics and bacillicides, but these drugs all have their drawbacks. Now, however, Mr. Worrall, a noted scientist, claims to have found among the coal products a disinfecting body apparently superior to all previous ones. He has named it izal, and Dr. Klein, after a series of exhaustive laboratory experiments, is said to have found it absolutely destructive of the spores of some of the most intractable and malignant diseases. Unlike most powerful disinfectants, it is non-poisonous to human beings, and may be taken internally, diluted. Dr. Klein's experiments go to prove that, diluted with 200 parts of water, izal absolutely destroys the vitality of the microbes of diphtheria, scarlatina, glanders, erysipelas, typhoid and cholera. *Black and White*, in speaking of the discovery, says: "It is not too much to say that izal, unless the conclusions of one of the most competent of our physiologists are erroneous, is the most important discovery in practical therapeutics made during the present generation."

An Addition to Therapeutics.

Mrs. Selby—"Doctah, the chile dun gone swaller'r pint ob ink."

Doctor—"Hab yo' dun ennyding fo' de relief ob 'im?"

Mrs. Selby—"I'se dun made 'im eat free sheets of blottin' paper, doctah. Was dat rite?"

They had asked Dr. Sandblast, the eminent surgeon, to carve the festal fowl, and he stood over it with the carving knife delicately held in the first position. "The incision, you will observe, gentlemen," he began dreamily, "commences a little to the left of the median line, and—oh, excuse me, Mrs. Parmalee, I thought I was in the—*may* I help you to a little of the femur?"—*Puck.*

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SATURDAY, JULY 22ND, 1893.

EDITORIAL.

TETANUS; ITS CAUSE AND CURE.

In 1884, Nicolaire (*Deutsche Medical Wochenschrift*, No. 42, 1884), produced tetanus in certain of the lower animals by inoculating them with garden earth. He also showed that the disease could be transmitted to other animals by inoculating them subcutaneously with the pus from the infected animal. Later it was shown by Carl and Rattone that it was an infectious disease, and could be transmitted from man to animals by inoculation. The bacillus was isolated and obtained in pure culture by Kitasato in 1889. Tetanus has been produced by a large number of investigators by inoculating animals with garden or field soil. So numerous have been the cases of tetanus in man from injury, and the test inoculation of guinea pigs with soil, that the bacillus is now known to be very widely distributed in nature.

Morphologically, the bacillus of tetanus is an exceedingly interesting germ. It is a slender rod-shaped germ with one end rounded and the other usually much enlarged, and containing a spore. The spore appears at the end in the form of a little sphere, giving the bacillus the appearance of a short pin. The bacilli are from two to three micromillimeters in length. They stain with the aniline dyes usually employed in staining bacteria, and they retain their coloring matter when treated after the Gram method. They are motile.

The bacillus of tetanus does not grow in an atmosphere containing oxygen. In anærobic cultures it develops at the room temperature, but grows best at a temperature of about 36°C. It liquifies gelatine and solidifies blood serum. In an atmosphere of hydrogen it grows very rapidly in alkaline bouillon and in gelatine. The addition of glucose to the culture medium increases the rapidity of the growth. The spores of tetanus bacilli retain their vitality for several weeks in a desiccated condition. They also resist a temperature of 80°C. maintained for an hour. They are rapidly destroyed by boiling. Experiments have shown that when animals are inoculated with tetanus bacilli, either in pure culture or otherwise, that the bacilli remain at the seat of inoculation and that death results from the action of poisonous substances elaborated by the growth of the bacteria in their place of injection. Kitasato has shown that cultures of the tetanus bacilli that were filtered through porcelain, which removed all of the bacilli, would produce the disease; *i. e.*, symptoms and death. The result of certain European investigators show that this germ does not become attenuated by artificial cultivations. Biegor, Fraenkel and Kitasato have isolated a toxalbumin from cultures of the tetanus bacillus, which is very fatal. Much work has been successfully done in producing immunity in mice and guinea pigs against tetanus.

With the better knowledge of the disease has come a better method of dealing with it, and we now have authentic reports of the healing of traumatic tetanus by the use of the antitoxin of tetanus, prepared by Lizzoni and Cattani.

Schwarz (*Centralblatt f. Bakteriologie*, X. 1891), reports a case of traumatic tetanus that was cured by the use of subcutaneous injections of an emulsion of *antitoxin*, prepared from the blood of a dog that was immune to the disease. A boy of fifteen years was injured August 20th. Early in September he showed symptoms of tetanus, and September 17th was taken to a hospital. He exhibited every symptom of tetanus. September 18th, he received 15 grams of antitoxin; it was ground up in 3cc. of water and injected. September 19th, the injection was repeated in the morning and in the afternoon a second injection of 2 grams. September 20th, a marked improvement in the symptoms, in the afternoon 0.25 gram injected. September 21st, still further improvement, injection repeated. September 22nd, patient continued to improve; no injection. September 23rd, nearly recovered; the tetanus symptoms entirely gone., October 1st, the patient had fully recovered and was dismissed from the hospital. After each injection there was a depression in the temperature and after that a certain amount of perspiration.

Pacissi (*La Reforma Medica*, No. 4, 1892), reports a successful treatment of tetanus with the antitoxin (prepared from the serum of an immunized dog). After eight injections of the antitoxin the symptoms were relieved.

Several other cases of similar success in the use of this substance are reported, but they all tend to the opinion that the substance is practical and could be used with advantage in all cases of traumatic tetanus. The preparation of the antitoxin requires a certain amount of care and knowledge of chemistry and bacteriology. The results that are being obtained with this and other substances, prepared either from cultures of bacteria or the blood of immunized animals, suggest the importance of state boards of health equipping themselves with a laboratory and bacteriologist competent to prepare these substances for the needs of the physicians within their jurisdiction.

An Excellant Label Paste.

The *Nat. Dr.* claims, is:

℞	Potato starch	1 part.
	Water	3 to 4 parts.

Solution of caustic soda enough to gelatinize.

It is said this will not sour.

For Laryngeal Phthisis.

L' Union Medicale (in *Therap. Gaz.*,) suggests the following:

℞	Iodoform	gr. lxxv
	Calcis phosphat pulv	ʒ iiss
	Acid boric. pulv	ʒ j
	Menthol	gr. v

M. Sig. Insufflate, morning and night, a sufficient amount into the larynx. For relief of difficulty in swallowing, or the irritation which may be present, it is well to use a swab wet with a solution of cocaine.

—*Ex.*

LOCAL ANÆSTHESIA may be readily produced in about a minute by a spray of menthol, p. j; chloroform, p. xv; and will last from two or six minutes.

TRANSLATIONS.

CLASSIFICATION OF ARTERITIS.†

Circumscribed arteritis, according to Lancereaux (*Le. Bull Méd.*, March 29, 1893), has for its principal characteristic the circumscription of the arterial lesion, its localization to a vessel of medium caliber, its termination by obliteration or by aneurismal dilatation. It comprises three distinct varieties, syphilitic arteritis, tubercular arteritis, and embolic arteritis. The first two varieties, due to a general infection of the organism, are perfectly defined; the third, produced by the action of a foreign body, is no less clear, notwithstanding its varied origin, in its manifestations and its evolution.

Syphilitic arteritis is localized to the arteries supplied with lymphatic glands, and particularly to the cerebro-spinal arteries; whilst the other vessels and notably the large arteries, as the aorta and its principal branches, are slightly or not at all exposed. Several authors, however, have described syphilitic lesions of the large vessels. Weber reports that he has seen tumors of considerable size developed in the thickness of the middle tunic of the pulmonary artery together with gummy tumors upon the skull and in the liver. The circumscription of this lesion favors syphilis, but it is necessary to investigate further its evolution in order to positively admit its specific origin. In a case reported by Virchow, that of a young syphilitic girl afflicted with interstitial nephritis and whose aorta was garnished with sclerotic plaques, Lancereaux does not hesitate to recognize, in spite of the age of the patient, the existence of ordinary atheroma. He finds the proof of this in the multiplicity of the lesions of the aorta and in the nephritis which accompanies them. Most of the other cases of alteration, or of aneurism of the aorta attributed to syphilis, have no more value than the preceeding, because they are not based upon the proper characteristics and a special evolution, but only upon the false adage: *post hoc propter hoc*, if not upon the amelioration of the phenomena of aneurism subsequent to specific treatment, as if this treatment could repair a destruction of the arterial wall. Lancereaux believes that a certain number of these cases have a malarial origin. The frequency of alterations and aneurism of the large vessels, in the British Army and Navy, has for a long time attracted the attention of the English military surgeon. Welch concludes wrongly that this affection is due to syphilis. It should be remembered that the frequency of this affection is relatively larger among the colonial troops who are much exposed to a malarial infection, and Lancereaux is led to believe that the frequency of aneurism in the English army is due neither to syphilis nor to alcoholism, but rather to paludism, a disease equally as common among the troops and which has a tendency to produce a special aortitis.

The influence of syphilis upon the arteries, especially those of the cerebro-spinal centres is incontestable, these vessels, are in truth, the seat of predilection of the action of the syphilitic virus, and the reason of this lies in the lymphatic glands that surround them, for it is known that the lymphatic system is the avenue of the development of the manifestations of constitutional syphilis. The lymphatic becomes enlarged and pressing externally and internally upon the middle coat of the artery, the latter atrophies, and the blood, pressing upon the thinned wall, produces a simple dilatation or a true aneurismal tumor. In the other cases, the syphilitic arteritis produces a narrowing or even an obliteration of the caliber. These are followed, in either case, by an ischemia more or less complete, and often a rupture of the vessel.

Tubercular arteritis is relatively rare, but it likewise tends to become localized in the arteries of small and middle size and especially in those that possess a lymphatic adventitia, as the lymphatic medium is necessary to the development of the cerebral arteries. It shows a special predilection for the cerebral arteries and especially for the branches of the pulmonary arteries. Histolgically, it consists in an infiltration of the arterial tissues with granulation tissue. The external tunic, the beginning point of the process, is filled with round cells (embryonal cells), forming islets more or less voluminous, which invade the normal tissue little by little and in which may be found the so-called giant cells. This tissue degeneration becomes necrotic and ulcerous, and thus eventually dilatation or aneurismal tumors are formed. This terminates by obliteration, aneurismal dilatation or by rupture. The aneurisms in the lung are usually found in cavities, are single or multiple, and may be mixed, saculated or varicose, in their nature. Tubercular arteritis is an insidious condition and one difficult to diagnose.

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† Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Dorland, M.D.

Embolic arteritis has for its usual seat the branches of the pulmonary arteries and the cerebral arteries. The foreign body is surrounded by a development of embryonal cells due to the inflammation produced, a fibrinous clot forms and the calibre becomes obliterated by inflammatory action. The tunica intim takes on a vegetation and produces an endothelial bed and this tends to produce the obliteration, which is the most common termination. At other times ulceration occurs and aneurismal tumors are formed.

APPENDICITIS AND ITS COMPLICATIONS FROM A SURGICAL STANDPOINT.*

The author, Dr. G. Lennander (*Upsala Läkarefören Forhandl,* bd. xxviii, Hft. 1.), reports 34 operative cases, which were operated upon by him and his assistants between the fall of 1888 and summer of 1892. There was but one death, which took place 5 weeks after the operation, caused by pyæmia, a small gangrenous portion of the intestines having been overlooked during the operation. In 3 cases, laparotomy with extirpation of the vermiform appendix was performed, in which diffuse peritonitis existed.

In 3 other patients, suffering from appendicitis, there were found 2 or more incapsulated intra-peritoneal abscesses, which were opened and drained; in only 2 of these was it possible to remove the vermiform appendix; of these 3 it was found necessary to make incisions through the vaginal vault and the colon.

In 12 cases, abscesses were found in the iliac fossa and in the lumbar region, and opened at those places; 3 times extirpation of the appendix; of the 9 remaining, 3 have had returns and there was 1 death, which has been reported at the beginning.

In 7 cases laparotomy and amputation of the ulcerated or gangrenous appendix; operation 40 to 60 hours after the beginning of the attack with the exception of 2, in which the attacks had lasted four days in one, and in the other nine days. Pelvic abscesses were present in 3 cases, 1 having discharged through the vagina and 2 through the large intestine. Amputation of the vermiform appendix was performed five times during the free intervals. Chronic appendicitis was diagnosed in one case, and operation revealed an abscess of the appendix, while the adhesions between the ileum and the anterior wall of the abdomen were dense; these were released during the operation.

As far as the author has been able to follow his cases, the patients are all well; three still remaining under observation. During this time two patients who refused operation died of gangrenous appendicitis; one had an inoperable carcinoma at the head of the colon and the other was supposed to be suffering from a perforating ulcer of the stomach, this presumably giving rise to the existing peritonitis. Etiologically, the author speaks first of foreign bodies or fecal calculi; the latter, according to his idea, forming in the appendix (not in the cæcum as Talamon teaches); further, he believes in the possibility of a retention of the secretions, aided by the swelling of the mucous membrane, and particularly assisted by a bend or constriction of the bowel.

The author has observed this in one case in which he operated, and later was able to palpate it in two cases before the operation. The primary stercoral typhlitis was observed by the author in several cases and he is therefore inclined to take the opposite view of Sahli. Severe repeated attacks of appendicitis, in which the pathological changes have been entirely confined to the vermiform process, and suppurative peritonitis, in which there were only catarrhal changes in an unperforated vermiform appendix, were also seen by the author. Lennander prefers the rectal and vaginal examination. He has, in several cases, found the difference in temperature above the normal between the axillary and the rectal methods, which Madelung has found to be pathognomonic of suppuration in the lower portion of the abdomen or the pelvis.

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*Translated for THE MEDICAL AND SURGICAL REPORTER by Marie B. Werner, M. D.

L. does not operate during the interval between the attacks, only at the express wish of the patient. He then opens down, releases all the adhesions which seem, to him, to be of pathological origin, and then invaginates the stump into the cœcum. If diffuse peritonitis is present, a section is unavoidable, indeed strictly indicated. If the pus formed has become incapsulated, he tries, if possible, to avoid opening into the free abdominal cavity and prefers to drain, and, with the aid of antiseptics, feels certain that this method is less dangerous than to allow an unopened, undrained pus pocket to remain in the pelvic cavity.

His incisions are usually in the median line or laterally. If the latter, he directs his incision along the motor nerves, in order to avoid hernia. During the operation, the author uses a warm solution of sodium chloride (sometimes 20 to 30 litres). If at all possible, the appendix is removed, and generally no intestinal suture is made, but he closes the opening by the application of Pean's forceps, which are left in the wound; drainage of iodoform gauze is used between the loops of small intestines, Keith's glass drain is also placed. The accumulative fluid is aspirated during the 24 hours, once in 3 hours or oftener if necessary.

Narcosis, at first chlorform by drops and later ether. The after treatment consist in small doses of morphia for the existing pain. To avoid symptoms of ileus, the stomach and intestines are washed out; nourishment is given as early as possible and in rapidly increasing doses. If necessary, warm enamata (500 to 600 dr.) are given to check the thirst, once or twice daily.

The continnance of even slight symptoms of ileus is an indication, to the mind of the author, of more abscesses or of fecal accumulations. As a rational treatment in cases of relapses of perityphlitis, L. recommends careful massage, but only in the Doctor's hand; this may also be the best method by which he will be able to gain thorough knowledge of the anatomical conditions present.—*Centralb. fur Chir.*, 1893.

The Effect of Smoking Tobacco on Boys.*

Among 32 school boys, who were examined by Decaisne, between the ages of 9 and 15, of whom all smoked, he found that 22 suffered from disturbances of the circulation, of digestion, mental relaxation and decided taste for alcoholic liquors; 8 of these were suffering from anæmia and from intermittent pulse.—*Der Kinder-Arzt 1893.*

A glasgow physician is the defendant in a curious breach of promise case. His courtship was progressing smoothly enough until his *fiance* requested his services for treatment of fistula. The trouble was of tuberculous origin. He treated the case, but lost his affection for the fair but unfortunate patient. Perhaps if he loses his case, he can offset the damages by a bill for professional services.

PROF. KEEN says a good point to bear in mind in diagnosing a case of *Chancre* is that you will never find chancres on the walls of the vagina, as they always appear on its outlet.

PROF. HARE says the iodide of potassium will be found to the best adapted, not to the acute stages of rheumatism, in which in the joints are generally very hot and painful, but to the sub-acute stages, in which the joints are swollen and the return to the normal condition seems to be very slow.

WE are generally so carried away by the last words of famous personages, that we never pause to reflect that the first words of these same heroes were "goo, goo, goo!"—*Puck.*

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*Translated for THE MEDICAL AND SURGICAL REPORTER by Marie B. Werner, M. D.

ABSTRACTS.

MEASUREMENTS OF THE LIVER AT DIFFERENT AGES.

Little has been written on the normal measurements of the liver and their pathological variations during infant life.

The clinical measurements are relatively easy to make and to practicing physicians are of more importance than a knowledge of the various diameters and the weights.

These last can never serve as a means of comparison between the conditions of health, of functional derangement and of serious pathological changes. It is not possible clinically to determine the absolute dimensions of the liver, because of its being surrounded by resonant viscera—the lungs and intestines. Clinical measurements are, however, of value if they show a regular progression according to age, their variations depending simply on passing troubles of digestion. The author quotes from Vogel, of Dorpat, and gives the description of clinical examinations which he has adopted.

Physical examination of the liver is made in children exactly as in adults. Percussion in the axillary and mammary lines determines the measurements of the right lobe, and percussion in the vertical line through the sternum that of the left. Restlessness in little children makes this determination difficult. We generally cannot establish the influence of respiration on these measurements before the age of three years. The mammary and axillary lines are the only ones upon which Douchez believes percussion to be of practical use. He has often, in cases of considerable hypertrophy of the liver, failed to find any evidence of increase in its posterior face by means of percussion on a vertical line drawn through the scapula. He believes that there are three causes of error in examination that are of especial hindrance in children. They are excessive resonance of the thorax, resistance of the abdominal muscles, and distension of the stomach and intestines by gas. The greatest source of error is the extreme resonance of the thorax, especially in the newly-born.

In spite of care, measurements on the living are commonly a little less than on the dead. This statement the author proves by a table showing the results of many observations. Nevertheless, although giving less liver dulness than similar examinations after death, these results in the living represent really the impression given to the finger and ear; and the error, if it be one, is reproduced uniformly and proportionately at all times.

In certain cases, indeed, the demarcation of the upper and lower borders of the liver by percussion may leave doubt in the mind, and it is then well to verify by palpation. When the lower border extends abnormally low, palpation immediately below the false ribs encounters a certain resistance provided the child will relax his muscles. If, on the contary, he holds himself tense, the finger meets with resistance at any rate; and it is well to repeat the observations several times in the same place.

Percussion serves better than palpation to define the slender edge of the liver, which is easily displaced. This thin edge of the liver may be resonant to percussion on account of its thinness and its relations with the intestine; and this occurs even after the abdomen has been opened. The child is best examined on his left side, the arm being raised, the hand grasping the bed and the left flank supported on a pillow. Percussion should be made on both the mammary and axillary lines; the two observations serving as a control upon each other, for the upper line of dulness is practically on the same horizontal plane in both of them.

In order to best show the relation of measurements, the writer has grouped his observations into three classes:

1. Measurements on the cadaver before and after opening the subject.

2. Measurements on the liver of the living in health.

3. Measurements of the liver of the living in disease.

The author presents a table of 88 observations. He finds that in the greater number of infectious diseases, including even measles and diphtheria, it is not uncommon to find enlargement of the liver, due probably to incomplete elimination of the poison. His conclusions are as follows:

1. The exact determination of the borders of the liver in children is difficult, because of the involuntary contraction of the muscles, also on account of the resonance found over the thin lower edge and of the oblique position of the upper border.

2. The measure of dulness of the anterior face of the liver, in the living, is almost always less by one or two centimeters than the real measure on the cadaver, either before or after opening the abdomen; we should therefore estimate this dulness from its extreme limits in order to reach as nearly as possible to the truth.

3. The upper border of the liver corresponds in general to the interval between the fifth and sixth ribs.

4. In the healthy state, the vertical measurements increase almost regularly with each year's growth, excepting in certain individuals.

5. This appreciable growth between the second and ninth years ceases almost entirely by the twelfth year and can be measured in centimetres by adding one, two or three centimetres, an additional centimetre for every year of the child's life up to eight years exclusive. Beyond eight or nine years the liver dulness measures approximately nearly, but not quite, one centimetre for each year of the child's life.

6. The liver was found *somewhat large* in cases of catarrhal jaundice and gastric disturbance; *large* in cardiac disease, *very large* with amyloid liver, syphilitic liver, fatty liver and hydatid cysts.

7. The slightest disturbance of health may cause a variation of two to four centimeteres, and a variation of three to ten centimetres was found with certain grave lesions.—*Douchez: Revue Mensuelle.*

ARTIFICIAL DIAMONDS.

Mr. Torald Sollmann, a registered pharmacist of Ohio, for the present residing in Paris for the purpose of the pursuit of special branches of study, writes home to friends a very interesting account of some experiments and demonstrations in the manufacture of artificial diamonds, which we are kindly allowed to reproduce. He says:

"Yesterday I saw the biggest thing here yet. One of the fellows at the laboratory gave me an entry ticket to a lecture on diamonds by Prof. Moisson, of the School of Pharmacy. Several months ago, he first succeeded in making artificial ones, the first real diamonds ever made; former ones all turned out to be quartz. The lecture lasted an hour, and it took place in the big amphitheater of the Arts and Metiers Building. There was not a vacant space in the room, even the stairs were occupied. The lecture was illustrated by experiments which were the most interesting part, something I don't suppose I will ever see again. The professor started out by saying that the diamond and the other forms of carbon were chemically identical. To prove it, he burned some lampblack in a tube through which a current of oxygen was passing, and conducted the carbonic acid into limewater. Then he burned a diamond. It was done in a platinum tube heated by a Bunsen burner, in a current of oxygen, the carbonic acid being also conducted into limewater. The image of the interior of the tube was thrown on a screen, by means of a stereopticon, and we could see the little diamond gradually disappear. Then he further proved the identity of diamond and graphite by placing a diamond in the electric arc, when it was changed into graphite. Then he told us the difference between the various forms of carbon, that it depended upon the molecules combining among themselves. The diamond crystalizes in octohedra, the graphite in hexagons, the other forms are amorphous; the diamond scratches the ruby and can, when in fine powder, be separated from graphite by a liquid of the specific gravity of 2.3, in which the latter floats, whilst the former sinks. This he also illustrated. Then he came back to his subject proper. When he took up the subject of producing the diamond artificially, he started in by studying the earth in which it was naturally formed. He found that all the earth, wherever found, contained a large amount or iron. Here he exhibited a piece of diamond-bearing clay from the Cape. Then he gave an account of his experiments. He brought a mixture of carbon and iron to an intense heat. Here he described the furnace he employed and showed it. It produces a heat of 3500°C. (6300°F.) It is formed by an electric arc with 400 amperes, inclosed in a furnace of lime, which is the only substance capable of withstanding that temperature. Well, he heated his mixture, and obtained graphite. For two years he kept on experimenting, substituting gold, silver, nickel, manganese, chrome, and everything else, and he invariably obtained graphite. It began to dawn upon him that something else was necessary and that something was pressure. About that time they discovered a meteorite which contained microscopic diamonds, identical with the microscopic ones found in large numbers in all the diamondiferous clay. This put him on the track, for iron possesses the property of contracting in passing from the liquid to the solid shape. In producing this change suddenly, the pressure produced by the solidifying outer envelope on the still liquid inner mass is something enormous, and any carbon inclosed in it will be subjected at the same time to a high degree of pressure and heat. And that is the way he makes his diamonds, which he now proceeded to do, or rather several assistants did it. The iron containing carbon was placed under the arc in the furnace already described and the current turned on. The lime is such a good non-conductor that he could place his hand on it two inches from the place where the temperature was 3500°C. That is the highest temperature possible to obtain with our present means, as then the carbon of the electrodes begins to volatilize. After melting it for a while, the cover was taken from the furnace, the crucible (burned to a white heat, so intense that the operators had to wear blue spectacles), was lifted from it by forceps, and plunged into a jar of cold water. Plunging iron of 6300°F. into cold water is rather a dangerous experiment and enthusiasm ran high. I can't explain the phenomena which took place. It did not make much noise and no spurting, but for a time a good sized flame was over the water. After a minute he took it out again and let it cool gradually. He then performed the same experiment with carbon and silver. After cooling they are treated with hydrochloric and nitric acids respectively, the graphite separated from the diamonds by means of sp. grav. and it is finished. We did not see that part of it, it would have taken too long, but he showed us by the stereopticon, first, the diamonds of the meteorite, then his artificial ones. The largest is 3-10 of a milimeter in diameter. At present it will be impossible to make them 'handsomer and larger,' the conditions of heat and pressure being unrealizable, but at least we can make diamonds. — *The Phar. Era.*

Scrotal Eczema.

The following is recommended (*Memphis Med. Mo.*):

℞	Hydrarg. chlor. mit.	ʒi
	Zinc oxidi	gr. xl
	Bismuthi subnit	ʒiss
	Lanolin	℥i
	Vaseline	℥ss

M. Ft. ung.

Sig.—Wash the scrotum in hot borax water, and apply the ointment night and morning.

Spice Plaster.

Parrish.

Powdered capsicum,
Powdered cinnamon,
Powdered cloves, of each, 2 ozs.
Rye meal,
Spirits,
Honey, of each, a sufficiency.

To be make into a cataplasm by trituration on a plate, and spreading upon a close fabric. It should be made up extemporaneously when required.

Urticaria.

Sodium salicylate, in doses of three grains every two hours, is said to be very efficacious in relieving urticaria. Three or four doses usually suffice for a cure of the most obstinate case.—*Med. Record.*

Hardening and Coloring Plaster of Paris Casts.

First dry the casts in an oven heated to about the temperature used in baking bread. After they have cooled so that they can be handled without burning the hands, immerse them in a strong, clear solution of alum, and let remain until the alum commences to crystallize on the surface. Remove and wipe off the alum with a wet rag, and again dry in a warm(not hot) oven. When entirely dry immerse in boiled linseed oil cut with a little turpentine. When this is nearly dry apply bronze powder of the desired hue. — *Nat. Drug.*

CURRENT LITERATURE REVIEWED.

THE MONTREAL MEDICAL JOURNAL

for July. Dr. A. D. Blackader contributes an article on the

Etiology of Tuberculosis.

In regard to the influence of heredity, the author states that it is the very rare exception to meet with hereditary tubercle, meaning thereby the congenital transference of the virus, so that the infant enters the world with the bacilli in its tissues. In the vast majority of cases, heredity in tuberculosis signifies only "an excessive hospitality for the tubercle microbe, or a deficient capacity for dealing with him on the part of a too feeble phagocyte."

It may be said, then, that the view generally held at present in regard to the hereditary character of tuberculosis is that cases of true heredity are extremely rare, but that instances may occur where the mother is suffering from general miliary infection, or from definite tuberculous disease of the genital system.

In reference to acquired infection, there are three paths by which the bacilli may obtain entrance: (1) By inhalation through the respiratory tract. (2) With the food through the alimentary tract. (3) By inoculation. Of these perhaps the most important is the first—by the inhalation of dust containing the bacilli in a dried state. These bacilli appear to have great powers of resistance, and are able to retain their infective powers for a long period of time. While in a moist state they do not appear to escape from the sputum, but when the sputum becomes dry it is readily converted into dust, and the bacilli are then liable to be diffused through the air. Great care should therefore be taken over the expectoration of tuberculous patients, that it be thoroughly disinfected as soon as raised and afterwards destroyed, else the apartments occupied by such patients become infective in time through such dust clinging to carpets, bedroom hangings, etc. Not only may the living apartments become infective, but business offices and railway carriages, and even the dust of the road-side become a source of contagion.

The predilection of the apices to the occurrence of symptoms indicative of the presence of the bacilli is well recognized. This predilection has been explained on several theories; among others, it has been referred to an imperfect expansion of the apex or to defective circulation. Recently, it has been pointed out that the thorax at the apex lacks contracting muscular tissue, and with forced expiration there is a recurrent passage of air into the upper lobes, interfering with the expulsion of any foreign substances that may have entered the bronchial tubes. When they have once entered this part of the lung, they experience an amount of rest, which enables them to penetrate to the sub-epithelial tissues and enter the lymph canals. This penetration generally takes place in the alveoli, where the epithelium is non-ciliated, rather than in the ciliated passages of the smaller bronchi.

While, in adults, inhalation of the bacilli and infection through the respiratory tract is much the most frequent origin of tuberculosis, in children the alimentary tract affords an important path through which the bacilli effect an entrance into the system. The upper part of the tract, owing to the very frequent disorders of the throat, mouth and teeth, occasionally becomes the place of primary infection from which the bacilli pass to the cervical and sub-maxilliary glands, and thence may occasion general infection.

Dr. G. E. Armstrong reports

Five cases of Abdominal Section after Confinement.

In the first case, fever came on after the patient got up on the tenth day. The symptoms increased in severity till an operation was demanded for relief. At the section the uterus was curetted, swabbed out with a solution of permanganate of potassium and packed with iodoform gauze. The omentum was found adherent to the uterus and left tube and, on separating the adhesions, a pus sac was discovered, which was emptied, the ovary and tube tied off and part of the omentum removed. The patient made a good recovery.

The second case had been attended by a midwife and, at the section, one tube was found enlarged to the size of an adult's wrist and contained small pockets of pus. The ovary was of natural size and gangrenous.

In the third case, the trouble seemed to follow the administration of an enema.

"At 10 o'clock in the evening of the ninth day, the nurse decided that her patient's bowels needed moving. As the baby had a little looseness the nurse though that an enema was the proper thing to give. The patient objected strongly to this, on the ground that after her first confinement she had an enema and that she suffered very great pain for 48 hours afterwards. Her objection, however, was overcome and the enema was given. She was almost immediately seized with intense abdominal pain, with great general tenderness, and vomiting. She had a small stool almost immediately and her bowels did not move afterwards. The vomiting persisted and soon became bilious. Hypodermics of opium were given to relieve the pain. The abdomen became tympanitic, the temperature rose, the pulse became rapid and shabby, the face became drawn and anxious, and it was evident that the patient was suffering from some severe lesion, sufficient to cause a condition of collapse. The history and symptoms pointed to some acute obstruction of the bowels, possibly a volvulus. Her condition was an extremely grave one, and it was easily seen that if anything was to be done more than had already been done, it was of a surgical nature. An exploratory incision was advised.

The peritoneal covering of the intestines was congested and two pints of thin, pale yellow odorless pus flowed out. After thorough irrigation, the uterine appendages and appendix vermiformis were examined without finding any condition that was thought to bear a causitive relation to the peritonitis. The tube and ovaries were tied off. This woman was moribund when the operation was begun and died ten minutes after being removed from the table, or just 24 hours from the giving of the enema and onset of symptoms."

In the fourth case the patient was siezed with severe pain, rigor and high temperature two months after confinement. At the section, a large tubo-ovarian abscess on each side was found, The patient recovered. The author would teach the lesson, from these cases, of strict attention to antiseptic details in confinement and the immediate repair of all lesions occuring in child-bearing.

This number of the magazine concludes with the report of the committee on tuberculosis appointed by the Medico-Chirurgical Society. The following

Rules for the Prevention of Tuberculosis

are advised.

1. For the safety of those around him the patient should only expectorate into cuspidors, and when not bedridden he should carry a pocket spit-cup for use whenever in the house and places of public resort where there is no cuspidor available. A simple bedroom cuspidor can be made out of a cup kept for this purpose alone, and half filled with water.

2. To make sure that their contents do not become dried up, and so carried off as dust the cuspidors should contain water. Their contents should be poured daily in the sewer or cesspool (where the bacilli are soon destroyed).

3. Where the patient is up and about, and cannot employ cuspidors, handerchiefs must be used, which are changed frequently, and placed in boiling water so soon as they are done with.

4. The soiled handerchiefs and bed linen of such patients must be kept apart from those of healthy persons, and must be well boiled in the process of washing.

5. Unless the position of the patient render this an impossibility (and in this case, for the safety of the family, he should enter a hospital) the patient must sleep alone—preferably in a room by himself.

6. Whether the patient is up and about, or whether he is confined to bed, the following points should be attended to with regard to the bedroom.

(*a*.) It should be sunny, well ventilated and free from dark corners.

(*b*.) All articles which collect dust should be removed—any carpet present should be replaced by floorcloth. The curtains, if any, should be of light washing material and should be washed frequently in boiling water.

(*c*.) The walls should be whitewashed, or covered by material that can be rubbed by damp bread or damp cloths.

(*d*.) The floor, and the room in general should never be dry dusted, but should be cleaned by damp cloths, so as to prevent the dust flying about.

(*e*.) After the death of a patient suffering from phthisis, the room and bedding should be most thoroughly disinfected. The walls should be given a new coating of whitewash, or may be repapered only after all previous coats of paper have been well dampened and then scraped off. The bedding and clothing of the deceased should be disinfected in the dry steam disinfector; where possible, they should be destroyed.

THE MEDICAL CHRONICLE, OF MANCHESTER, ENGLAND,

for July. The principal article in this month's issue is by T. Arthur Helme, M. D., F. R. S. E., on

The Relative Position of the Aseptic and Antiseptic Method in Midwifery.

The author takes the position that reliance on the antiseptic method lulls the practitioner into a false sense of security and the danger is that the principles of cleanliness are lost sight of. It is common, he says, to find that the nurse has given the douche without the least attention to the condition of the nozzle of the syringe, which is often very dirty. Or, the vulva is protected by a napkin which, after lying in a bucket soaked with prutrescent fluids for hours, is gently rinsed off in warm water, dried before the fire and applied. Or, the practitioner uses the douche for the purpose of destroying the germs for which his hands alone are responsible. The author next takes up the bacteriological investigations in regard to the presence of pus-forming germs in the healthy vagina and, after quoting at length the opinions of various observers, unhesitatingly decides that the normal vagina contains nothing which can be detrimental to the patient.

The details of aseptic midwifery are carefully gone into and rules formulated. In regard to the treatment of the patient after delivery, the author says. "The vaginal douche is just as useless and just as harmful, or more so, in a normal case, post-partum as ante-partum; therefore, shun it: and the less said about the intra-uterine douche the better. Indeed, a great deal too much attention is paid to the cleansing of the patient, and a great deal too little to the cleansing of the practitioner and nurse. If only half the nurse's energy were let loose upon her own and the doctor's hands, instead of being devoted exclusively to the squirting of the woman's internal parts, more benefit would result."

He regards the use of the perineal pad as of the greatest importance. It should be made of wool, absorbent, that all discharges may be taken up; sufficiently large, that the outer layers are never saturated. The pad should be composed of antiseptic material. It should be retained by a perineal bandage and changed at least every three to six hours.

The author sums up his paper as follows:

1. The vagina of the healthy normal pregnant, parturient, and puerperal woman must be regarded as *aseptic*. Our object is to prevent inoculation during and after labor: to attain this object, we look to—

(*a*) Thorough cleansing of the hands and arms and instruments, with attention to the clothes and infrequency of examination.

(*b*) Healthy surroundings, pure air, clean sheets, thorough cleansing of the external genitals before and after labor. No internal douching: The use of the perineal pad.

2. The vagina of a woman suffering from chronic discharge is *a priori* to be regarded as septic; our object is to destroy the germs already present, and to prevent fresh inoculation. In addition to the above treatment, therefore, we must here make use of internal antiseptic douching, before, during, and after labor, aiming at sterilization of the vagina.

And among this second group of cases the author would include those to which we are called in emergency, or after they have been for hours, or, may be, for days, in the hands of a midwife, and those where labor has lingered for hours with continuous body discharge or under other doubtful conditions.

With our precautions there will, however, always remain a third series of cases where danger comes from a part not to be reached even by the douche—the tubes—cases difficult of treatment, and still more difficult of diagnosis. But the question of vaginal antisepsis or asepsis does not materially affect these. Puerperal fever will occur, and its cause will probably be discovered post mortem.

The author wishes especially to condemn the unnecessary douching of the normal healthy woman ; the faulty manner of douching when the unhealthy conditions necessitate its employment; use of imperfectly cleansed napkins. He would also urge that too much attention is paid to the disinfection of the patient and too little to the disinfection of the doctor and nurse.

Dr. A. Graham Steell contributes a report of "A Case of Aortic Disease with Pulsus Bisferiens," illustrating the report with sphygmographic tracings of the pulse. The remaining paper is a continued report on "Further Cases of Ovarian Cystic Tumors" by Dr. D. Lloyd Roberts.

PERISCOPE.

THERAPEUTICS.

The Use of Cocaine.

1. Amount of cocaine used must be in proportion to extent of surface it is desired to anæsthetize. In no case should the quantity exceed one grain and three-quarters.

2. Cocaine should never be used in cases of heart disease, pulmonary disease, or in persons of highly nervous temperament.

3. In injecting cocaine, the intradermic method is preferable to hypodermic. By injecting into, not under mucous membrane or skin, the risk of entering a blood vessel is avoided.

4. During injection the patient should always be in recumbent position; in operations upon the nose and throat, the head should not be raised until anæsthesia is complete.

5. It is of great importance that cocaine should be pure, since its combinations with certain other alkalies result in poisonous compounds.—*Brooklyn Medical Journal.*

NEWS AND MISCELLANY.

Half Rate Excursions to the World's Fair via Washington and the B. & O. R. R.

The Baltimore and Ohio R. R. will run a series of special excursions from New York to the World's Fair at rate of $17.00 for the round trip. The trains will consist of first-class day coaches equipped with labatories and toilet conveniences. The trains will start from Jersey Central Station, foot of Liberty Street, New York, at 8.30 A. M., Aug. 5th, 9th and 15th, and reach Chicago at 4.30 P. M. the following day. Tickets will be valid for outward journey only on the special trains, but will be good returning from Chicago in day coaches on any regular train within 10 days, including day of sale. Stops will be made for meals at the dining stations on the line. A Tourist Agent and a train porter will accompany each train to look after the comfort of passengers. Tickets will also be sold for these trains at the Jersey Central offices in Newark, Elizabeth, Plainfield, Bound Brook and Somerville. New York offices 172, 415 and 1140 Broadway, and Station foot of Liberty Street.

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THE
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ORIGINAL ARTICLES.

THE USE OF MILK IN HEALTH.*

H. F. SLIFER, North Wales, Pa.

The object of this brief paper is to present a few important data upon which to base the rational administration of cow's milk in health.

Milk is a substance furnished and intended by nature as the sole food for the young of all mammals, and, for a considerable period of their existence, they feed upon it exclusively. It therefore, represents a complete food, in which are present all the elements necessary for the nutrition and growth of the body. The various substances composing milk, and their relative proportions vary within comparatively wide limits, not only in different races and breeds, but the milk of the individual is subject to extensive variation. Some of the causes are: age, period of lactation, nature and amount of food, time of feeding, state of health and the treatment of the animal,—scrupulous care and kindness should ever attend the milk-producing cow.

It is stated on good authority, that a cow, if frightened, will lose a large percentage of her butter fats for twenty-four hours. As showing the influence of the nervous system on the formation of milk, and controlling the relative proportions, also the total amount of solids: two years ago I attended a child in convulsions caused by the ingestion of unhealthy milk. On investigation, I ascertained that the milk had been secured from a cow that during the night had broken her chain and gained access to a barrel of swill, from which she gorged herself. A few days since, I saw a child suffering from indigestion, fever and vomiting produced by the taking of its mother's milk which, later in the day, it refused. In this case, the milk was altered through the influence of emotional excitement brought on by an altercation with her husband on the subject of intemperance.

It is evident that many conditions will influence the character of milk, varying in degree from a slight loss in the percentage of some of its constituents, to a profound chemical change so that it becomes poisonous.

In consulting the different authors, I find a marked discrepancy in the analysis of milk, showing conclusively that it is not uniform in its composition. According to Foster[1] milk contains:—

	WOMAN.	COW.
Water	90.	87.
Fats	2.75	4.
Sugar	5.	4.4
Proteids	2.	4.
Salts	.25	.60
	100.00	100.00

The fact that human milk is poorer in proteids, fats and salts, is of practical importance when cow's milk is substituted in the feeding of infants. The chemical reaction of human milk is alkaline; cow's milk neutral or acid. Human milk is free from bacteria; cow's milk contains numerous bacteria, when it reaches the consumer. Human milk is richer in sugar and water than cow's milk.

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*Read before the Montgomery County Medical Society July 26, 1893.

[1] Text Book on Physiology.

In the process of digestion, the casein of human milk coagulates in small flœculi in the stomach and is readily digested, while that of cow's milk forms large and firm coagula which dissolves with difficulty in the gastric juice. In prescribing milk, it behooves to keep constantly before the mind the above facts to assure success in the use of this important agent. I am of the opinion, that, with close study of each case on the part of the physician, and a reasonable amount of intelligence on the part of the mother or nurse, the cow's milk can be so modified as to bear so close a resemblance to human milk, that it becomes applicable in a large majority of cases.

Moreover, it has been conceded by all the higher authorities that animal milk is the proper food for children during the period of growth and development.

Prof. Henoch,[2] of Germany, says: "Cow's milk is but the substitute for mother's milk during the entire period of infancy. I consider the administration of other substances advisable only when good cow's milk cannot be obtained."

J. Lewis Smith,[3] of New York, says: "Milk should be the chief article of food during infancy, after the first year the food may be made of such consistence as to be given with the spoon."

A. Jacobi,[4] of New York, says: "The substitute should be as near normal woman's milk as possible; and naturally, when the latter cannot be had, animal milks are selected."

For the adult body in a state of health, milk is not a typical food. To furnish the required amount of carbo-hydrates, to supply potential energy for moderate labor, twenty pints would be required, which would give an excess of fats and proteids; so large a quantity of fluid would interfere with the digestive function, and soon overtax the kidneys.

The food for adults, therefore, must be more concentrated, and richer in the carbohydrates.

The most important use of milk in health, is in the feeding of infants and children. During this period, when the circulation and metabolism is most active, the tissues containing an excess of water, milk is peculiarly adapted for the nutrition of the body.

To be successful in the use of milk, the following condition must be observed:

1, The quality of milk used.
2, " quantity of milk used.
3, " time of feeding.
4, " manner of feeding.
5, " proper dilution.
6, " " addition.
7, " predigestion.

Milk should be as fresh as possible, and preserved upon ice. If this is impracticable, it should be sterilized and bottled and kept cool. If milk free from impurities and perfectly fresh can be procured twice daily, it is not always essential that it should be sterilized. Milk should have a sweetish taste. Neutral or but faintly acid in reaction. Sp. Gr. 1029. Should contain not less than 3 per cent., nor more than 4½ per cent of fats. The proteids, consisting of albunium and casein, should constitute about 4 per cent. The salts, consisting of phosphate of calcium, potassium and magnesium, potassium chloride with traces of iron and other substances, must also exist in a fair percentage. The fats and proteids are more subject to variations than other constituents of milk; therefore, demanding the most careful attention.

In regard to the quantity of milk given at each feeding, much care should be exercised. I am convinced that more children are over fed, than underfed. We should ever remember the capacity of the little stomachs, designed to receive and digest the milk.

According to the measurments of Dr. T. M. Rotch,[5] of Bostom, "The capacity of an infants stomach 5 days old is 25 cubic centimeters, (7½ drachms). Two months, 120 C. C (4 ounces). Twelve months, 300 C. C. (10 ounces). Two years, 740 C. C. (25 ounces). In regulating the amount of milk, a fixed rule cannot be adhered to in all cases, since individuals differ in their capacity and physiological demands. I am guided somewhat by the following index:

Age.	Intervals.	Amount.
1 Month	Every 2 hours during the day.	1 oz.
2 Months		2 "
3 "		3 "
4 "	Every 2½ hours during the day.	4 "
5 "		5 "
6 "		6 "
7 "	Every 3 hours during the day.	6 " to 8 "
8 "		
9 "		
10 "		
11 "		
12 "		

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[2] Lecture on Diseases of Children.

[3] Diseases of Children.

[4] Intestinal Diseases of Children.

[5] Cyclopædia of Diseases of children, Keating.

I feed as little as possible between the hours of 9 P. M. and 5 A. M., thus to enable the child and attendant ample time for sleep. Some children can do with one feeding, others demand food two or three times during the night. As the child advances in age, I decrease the night feedings, and prolong the hours of sleep.

The manner of feeding resolves itself into the simplest possible mode. Infants under twelve months of age, should feed exclusively from the bottle. In selecting the fittings, avoid all ostentation; I prefer a plain bottle with a short neck, with the proper capacity adapted to the age of the child, a plain rubber nipple with a small aperture. The child while nursing should repose in a comfortable position, and attended by a person who will remove the bottle as soon as the supply of milk is exhausted. Under no conditions, should the child be permitted to suck or play with the empty bottle. It should immediately be cleaned and placed in water, or water with the addition of soda or borax, until the next feeding. Milk should always be given at a uniform temperature, approaching that of the normal temperature of the stomach, about 100° F.

In substituting cow's milk for human milk, it is important to modify the former, so as to more closely resemble the latter. In comparing the analyses of the two, we observe that the cow's milk is richer in proteids, fats and salts. Very naturally, we endeavor to reduce these elements to their proper percentage; this is accomplished by the addition of water, which reduces all the constituents in an equal proportion, even those that are already deficient; this necessitates the addition of such constituents. The water employed for dilution, should always be boiled to destroy all organic substances which it may contain.

Water not only acts as a diluent, but alters the physical condition of the casein so as to render it more digestable, by preventing the formation of large coagula during peptogenic digestion.

The degree of dilution neccessarily depends upon the composition of the milk, the age and condition of the child. The following is my rule for dilution:

Age	1	Month	1	Part of	Milk to	3	Parts of	Water.
"	2	months	1	"	"	2	"	"
"	3	"	2	"	"	2	"	"
"	6	"	3	"	"	2	"	"
"	9	"	3	"	"	1	"	"
"	12	"	6	"	"	1	"	"

In case of indigestion, which is frequently due to an inordinate amount of proteids or fats, my experience has taught me that by increased dilution, and a reduction in the quantity of each feeding, the child is soon restored to its normal condition. There are also cases in which the fats are poorly digested and cause fatty diarrhœa; under such conditions, a portion of the fats should be removed and the usual quantity of water added.

Milk that has been properly diluted requires the addition of such elements as are deficient. Sugar should be added to the amount of two drachms to the pint. The kind of sugar which should be used is unimportant. It is natural to suppose that milk-sugar should be prefered, since it is a normal constituent of milk. Cane sugar, however, is less liable to undergo fermentation and is more readily digested. If a good quality of milk is used, it is seldom necessary to add cream; yet, in cases of constipation I have found the addition of cream to be beneficial. Owing to cow's milk being more or less acid, the addition of an alkali is essential; bicarbonate of soda or lime water will meet this indication. If constipation exists, phosphate of soda or magnesia should be used. Authors frequently speak of additions of farinaceous substances. My experience with these agents has been unsatisfactory. They are useful only so far as their mechanical action on the milk and irritating influence on the bowels are desirable. They are objectionable for two reasons: 1st, they differ too materially from normal milk elements; 2nd, they are difficult to digest. During early childhood the peptogenic functions predominate; the diastatic functions are not fully developed until later in life; and not until these two functions are equally balanced do we find vegetable matter properly digested. These substances undergo a more radical chemical change during digestion than animal substances. Since the peristalis in children is more active and the bowel comparatively short—according to Treves: "the length of the small intestine at birth is nine feet, and the colon one foot,"—the food does not remain sufficient time in the bowels for perfect solution and absorption of vegetable substances.

In children of naturally feeble digestion it is necessary not only to modify the milk by dilution and additions, but to predigest it to a degree that the most delicate stomach will retain and digest it. This is accomplished by the use of a digestion ferment, either pepsin or extract pancreatis. So far as my experience goes, I prefer the pancreatis, its peptoinizing action is more energetic and capable of digesting every form of food. The casein is so altered as to resemble human milk and is regarded by Dr. Albert R. Leeds as humanized milk.

In conclusion, as soon as the profession recognizes the importance of this subject, and exercise the same care in the selection and administration of milk that we exercise in the selection and administration of drugs; and more fully appreciate the appeal that is made to us year after year by that gigantic infant mortality, so soon will we reach a consummation most desirable.

CLINICAL LECTURES.

NASAL DEVIATIONS.

DR. GEORGE M. LEFFERTS.*

Gentlemen :—Nasal deviations may be divided into three great classes, viz: (1) Those due to severe crushing injuries, such as the kick of a horse, which belong to general surgery; (2) angular, curved, and sigmoid deviations; and (3) outgrowths from the nasal septum.

Setting aside the extreme cases of crushing injury of the nose, we come to a class of cases in which the injury may have occurred within the memory of the patient, but more frequently has happened so long ago that he does not recollect it at all. Rest assured, however, that somewhere in life-time of that patient if he have a nasal deviation, there has been an injury to the nasal septum. Probably when he was but a very little child, he has fallen, and the injury has been done at this time, and has not attracted any attention.

The septum should be a perfectly straight, thin, cartilaginous partition between the two nasal passages. The first form of injury to which I shall ask your attention is *angular deviation.*

On one side, you will notice a cartilaginous and bony projection, reaching well out into one nasal passage, and in the other nasal passage, there will be a concavity. The next form is known as *curved deviation.* In this, the bony septum is bowed out into a large curve, which is thin and quite resilent. Here, again, in the one passage there is a projection, and in the other, a corresponding concavity. The third or *sigmoid deviation*, is rather more difficult to diagnosticate. This diviation always involves both the cartilaginous and bony portions of the nasal septum.

These are the three forms which are commonly seen, and which are the only ones you need remember. In almost every case, these deviations have been produced by some injury at a remote period. All three forms give rise to nasal stenosis. The first result of a blow on the nose in childhood will be chronic hypertrophic rhinitis, a condition which requires years for its development. The deviated septum and the hypertrophic rhinitis together produce a severe stenosis, and as a result of this obstruction, the patient is deprived of the sense of smell, his voice is harsh and muffled, and his hearing is defective. This last condition is due to the fact that the chronic catarrhal process has extended through the Eustachian tubes, or, as a result of the constant rarification of the air in the middle ear, the external pressure constantly drives the drum inward, and this, with the chronic resulting hyperæmia, makes the patient more or less deaf. Secretions lodge upon the irregularities of the nasal passages; they are removed by the patient, and an abrasion or ulcer is the result; and is very commonly associated with recurrent epistaxis. In such cases, always look on the side of the nasal septum near the front, and you will often be rewarded by finding the origin of the bleeding. Let me repeat—as a result of the nasal deviation, there will be mouth-breathing, chronic pharyngitis, chronic laryngitis, occlusion of the nasal passages, loss of resonance of voice, epistaxis, and dry, inpacted secretions.

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*Professor of diseases of the throat and nose, College of Physicians and Surgeons, New York.

The sigmoid deviation is a comparatively rare form requiring special operative skill, and often a multiplicity of instruments for its proper relief; so, in order not to unduly complicate this subject, I shall exclude this from consideration, and shall ask your attention only to two common forms of nasal deviation—the angular and the curved.

With the Adams forceps, the nasal septum is grasped firmly, and twisted into place, and maintained in this new position by means of intra-nasal plugs during the healing process. It is a most uncomfortable treatment, and the results are most unsatisfactory. Another method of operating is with the stellate forceps, an instrument which makes a stellate incision through the curved deviation. This enables you to place the septum in the median line with much less force, and then the after-treatment is carried out with the intra-nasal plugs as before. The operation is theoretically very good, but the treatment is very annoying, and the results do not seem to me to justify its use.

Another operation consists in using a forceps which will punch out several pieces from the nasal septum in the portion of greatest convexity. You may undoubtedly by this means clear the nasal passages, but you have left a communication between the nasal passages, a condition which is almost certain to prove uncomfortable to the patient all his life time. A simpler, much more comfortable, and effective operation consists in introducing a long brass pin through the curve in such a way as to hold it approximately in the proper position. This process may be facilitated by making two or three slight incisions into the septum. This pin can be worn without great inconvenience to the patient until the septum no longer tends to return to its former abnormal position. This is the best method of treating curved deviation.

An angular deviation is best treated by sawing off or cutting off the obstruction under cocaine anæsthesia. In doing this, you must be careful not to make an opening into the adjoining nasal passage.

We must next consider out growths from the nasal septum—exostoses or enchondromata, if you please, There has been a blow on the nose which has most often driven the cartilaginous septum against the articulation of the vomer with the maxilla. This has resulted in a very slow perichondritis, and the slow formation of a cartilaginous or osseous tumor. The differential diagnosis is made from angular deviation by observing that there is no corresponding concavity in the other nasal passage. Hypertrophic nasal catarrh will occur in every case where there is a deviation or projection of the nasal septum. In this third class is to be found the most frequent causes of nasal occlusion, and also the simplest method of removing the obstruction. The operation is performed either with a nasal saw, or with the nasal trephine, driven by an electric motor.

A Taste for Science.

Little Dick—"I know how to tell how deep a well is without going down."

Father—"Ah, I'm glad to see my son has a taste for science. You drop in a stone and count the number of seconds required for the descent, I presume?"

Little Dick—"Oh, no, I tie the stone to a string and then measure the string." —*Good News.*

Otalgia.

Le Progres Medicale recommends the following in otalgia:

℞	Camphorated chloral	5 parts.
	Glycerine	30 "
	Oil of sweet almonds	10 "

Dip a tuft of cotton into this and introduce it into the patient's ear.

For Migrane.

The following is recommended:

℞	Butyl-chloral hydrat	grs. xv.
	Tinct. cannabis indicæ	mxv.
	Tinct. gelsemii	mxxx.
	Glycerin	f℥iv.
	Aquæ	ad f℥iij.

Mix. Sig.—An ounce to be taken at once; to be repeated in half an hour.

If a Child Die in the Uterus, Prof. Parvin says, the mother will not manifest any unfavorable symptoms unless air enters the uterus, in which case putrefaction will take place with all its unfavorable symptoms, particularly diarrhœa and chills.

COMMUNICATIONS.

THE EARLY REMOVAL OF TUBERCULAR FOCI OF BONE.*

B. MERILL RICKETS, M. D., CINCINNATI, OHIO.

It is not my intention to address you at any very great length, or present to you a subject upon which no thought has been given by the surgeons in general. My intention is to present some evidence that may lead us to make an earlier diagnosis and to adopt more prompt and radical measures in tuberculosis of the bones than are generally adopted. Tuberculosis is one of the greatest enemies which the human body encounters. It is surely the greatest destroyer of its bony anatomy. When once the frame, or any part thereof becomes diseased, the interest of all that is dependent upon it, becomes jeopardized. Syphilis has been accredited as the great destroyer of not only one, but of all kinds of tissue. It is a blessing compared to the ravages which tuberculosis produces, for in syphilis we have a remedy without much surgical interference. In tuberculosis, our hands seem to have been tied, and the wheel of progress in its treatment been made to stand still. There seems to be no constitutional treatment whatever of the least benefit in tubercular disease of the bones. It is not because there has been no effort, for medical literature has been flooded with the various remedies suggested for its cure. It seems now that tuberculin has fallen short of our expectations, failing in every particular, and giving no good results whatever. To my mind, the good to be obtained is through surgical interference only, and it then depends upon early operative procedures. Aseptic surgery has been the greatest boon to this class of work, and we must necessarily rely to a great degree upon cleanliness. However, we see how difficult it is to secure primary union even in the extirpation of tubercular glands. Seeing how hard it is to overcome these obstacles and to secure primary union in operation upon the soft tissue, we must necessarily shrug our shoulders when we come to the extirpation of tubercular disease of the bones and joints. However much I might be gratified to present this subject to you voluminously, I must confine myself to the early extirpation of the tubercular foci in the bones. I believe that surgeons in general are responsible for a large per cent. of the cripples as the result of tubercular disease, and I am thoroughly satisfied that there has been too much delay, and that we have expected nature to do what we ourselves should have done. My own plan has been to act promptly and radically where I have evipence of tubercular disease of either the shaft or epiphysis. Even where there is a question as to the identity, it is best to give the patient the benefit of a doubt and operate promptly. In nearly all of the cases where the periosteum is thickened and tender, we have reason to suspect the presence of tuberculosis. Even in cases of trauma, tubercular bacilli seem to find their way and develop rapidly in the injured tissue. When once they are implanted, they are not long in manifesting themselves and giving evidence of their presence; therefore, it is in just such cases as these, especially of the long bones, that an exploratory incision and early extirpation give such excellent results. It is a matter of course that one should hesitate to open a joint as promptly as he would a shaft, but unfortunately the shafts are not so frequently attacked as the epiphyses. It is a great question, and one which must be considered greatly from the light of experience, as to the time when a joint should be opened; however, I am safe in saying that the disease should be removed earlier when it attacks the epiphysis than when the shaft alone is involved. If the foci are thoroughly removed, let them be upon the surface or in the body of the epiphysis, then the destruction of bone is much less and its ability to repair itself much greater. Then too, when early extirpated, the possibility of the other bones being involved is lessened; the disease, when confined to *one foci*, is not so rapid in its progress as where several are to be found, although the single one may be as large as several of the smaller ones combined. Then too, the greatest number of tubercular foci are found in the epiphysis because of its spongy nature. There is not so much liklihood of the foci being multiple in the shafts, because they are more compact.

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*Read Before Mitchell Dist. Med. Association, Baden Springs, Ind.

I do not believe that there is one foci in a thousand that undergoes spontaneous recovery, let it be in the shaft or epiphysis; much less is it likely to recover when found in the epiphysis. Even rest, which has been so long considered a cure for tubercular joints, is of but little avail, giving to my mind, no evidence whatever of the reparative process as the result. When once an area has become attacked by the bacilli, there seems to be no limit to the destruction which it may produce. If they do not become multiple, the one will in the course of time destroy all the adjacent tissues. Tuberculosis of the epiphysis is what epithelioma is to the skin, and should be looked upon with as great consideration, and the treatment made as radical. The earlier an epithelioma is removed, the greater the chances for a permanent relief. Just so with a tuberculous area within the bone. The influence of the diseased area seems to be nothing more than that of a foreign body, except that the disease is more rapid and progressive. The opening of a joint free from any disease could result in nothing more than a certain amount of ankylosis. A joint affected with tuberculosis, necessarily results in ankylosis to a greater or less degree. Now, is it not better in cases where there is every indication of tubercular deposit, to give the patient the benefit of a doubt in exploratory incisions, followed, if necessary, by the removal of tuberculous matter? Until recently it was almost a crime to open the abdominal cavity. Now it has become quite a common occurrence, even though doubt exists as to what is to be found within that cavity. Just so with tuberculosis of shafts, and especially joints. What can we expect from any other than radical treatment? The development of large ovarian tumors does not now occur, simply because the gynecologists have become so skilled in making early diagnoses that procrastination can no longer be attributed to them. It is to be hoped that surgeons who are called upon to treat the various forms of tuberculosis, especially of joints, will not delay radical operative procedures until there is great derstruction of bone, accompanied by the formation of fistulæ. This is deplorable, and I think is largely due to the surgeon himself. Perhaps he does not early recognize the disease, or it may be due to his inclination to procrastinate, or his fear in assuming responsibility, but it is as unscientific to allow the head of the femur to become destroyed from tuberculosis, as it is to allow an ovarian tumor to grow until it weighs 50 or 75 pounds. It is one thing for the patient or other influences to be responsible for such a state of affairs, and it is another for the responsibility to rest upon the attending physician. Just how much of the adjacent bone should be removed with tubercular foci, is a question for the operator himself to decide. I have no doubt but that, in the majority of hip-joint cases, the disease has progressed to a greater degree than is generally supposed at the time it is presented for treatment. We must expect all degrees of progress in the destruction of bony tissue as long as the people are isolated and out of reach of surgical aid. Poverty and indifference are prominent factors in the delay of treating all classes of disease, but this should not be of any influence in establishing laws. Let the rules be established, and the good results made known, and there can be no plausible reason why the application should not become general.

A paste which will stick anything is said by Professor Winchell to be made as follows: Take two ounces of clear gum arabic, one and one-half ounces of fine starch, and half an ounce of white sugar. Dissolve the gum arabic in as much water as the laundress would use for the quantity of starch indicated. Mix the starch and sugar with the mucilage. Then cook the mixture in a vessel suspended in boiling water, until the starch becomes clear. The cement should be as thick as tar, and kept so. It can be kept from spoiling by the addition of camphor, or a little oil of cloves.—*Pacific Med. Journal.*

Freckles can be removed, according to Hager, by the application every other day, of an ointment composed of white precipitate and sub-nitrate of bismuth, each ʒi; glycerine ointment ℥ss.

FRACTURE OF THE SKULL, WITH PROTRUSION OF BRAIN SUBSTANCE AND REMOVAL OF SAME.*

W. R. GOOGE, M.D., ABBEVILLE, GA.

It is only recently that intrusion on the brain and membranes has been attended by so small a morality; but, owing to the great success and progress which has been achieved in antiseptic surgery, it is now of common occurrence.

It is not the purpose of this paper to let new light into the subject of brain surgery, but simply to corroborate the fact that if thorough cleanliness and strict antiseptic precautions are strenuously observed, the time will come and to a certain extent now is, that the surgeon may penetrate the most secluded recesses of the human mechanism and perform wonders which were not long ago shrouded in obscurity.

The time has been, and not long ago, when the idea was prevalent that intrusion on the brain or membranes was attended by almost certain death, or to penetrate the abdominal walls and peritoneum was considered folly of the most aggravated type, but thanks to the promulgators of antisepsis, we can now with impunity perform operations of this nature with a very low per cent. of mortality, which none dare to dispute. It is a boon to humanity and should be a source of self-congratulation on the part of every physician.

Fracture of the cranium with protrusion of brain substance and removal of the same, with recovery, is now regarded among the laity and also among some of the practitioners of medicine, as an impossibility, and it is the intention of the writer to disclose the results of a case of this discription and to show, if any doubt exists, that recovery in such instances is of very common occurrence.

On December 18th of last year, Mr. A. B. Pemberton, while guarding convicts for the Ocmulgee Brick Co., at Abbeville, Ga., was struck with the eye of a common club axe, on the posterior portion of the skull near the articulation of the occipital and parietal bones, the blow resulting in a complete fracture with the bone depressed and resting in the brain substance. The depressed bone had loosened quite a quantity of the brain, which, after observing the usual antiseptic precautions, I very carefully removed. It weighed just a little over half an ounce. After carefully removing every particle of matter that could possibly be foreign, I raised the skull with a common elevator to its proper position and placed it in apposition, after which I dressed the wound with iodoform gauze, packing the wound in order to prevent its healing externally; after which he was carried home and put to bed. Strange to say, he could walk and talk sensibly, still he had no recollection of the matter afterwards.

December 19th. Temperature 100° F. Absence of sensation, not being able to feel the prick of a pin; mind wandering. Gave sulphate of quinine and ordered an enema warm soap-suds and water every day.

December 20th. Temperature 101° F. Slight sensation; able to talk but would lose the subject.

December 21st. Temperature 100° F. Sensation returning and complaining of pain in left arm. Wound was right side of head.

December 22d. Temperature 90½° F. Pain more severe on left side. Sensation almost restored. Gave hypodermic of morphia and atropine.

December 23d. Pain gone. Sensation restored, and appetite good. Had eaten nothing since injured, being very much nauseated all the time.

December 25th. Temperature normal. Dressed wound and, strange to say, found no pus whatever. Patient able to sit up for dressing wound.

December 27th. Patient walked up town a distance of one-quarter of a mile, contrary to my directions.

January 1st. Bone had healed and removed packing from wound.

January 5th. Wound granulating nicely.

January 10th. Discharged patient with the wound almost well.

January 28th. Patient thoroughly well and accepted a position on S. F. & W. R. R. as section master.

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*Read before the Georgia State Medical Association, April 19, 1893.

The question might naturally arise, are you sure that you removed the brain substance? And in reply I would say, that I never was surer of anything in my life, and can corroborate every assertion by my associate, Dr. A. R. Royal.

PERIPROCTITIS WITH AN ABSCESS AND REPORT OF A CASE.*

M. L. CURRIE, M. D., MT. VERNON, GA.

Periproctitis is one of those infrequent inflammatory diseases which the general practitioner may at any time be called to treat, and which he may fail to recognize until much damage to his patient ensues. If properly diagnosed, it may then be improperly treated, owing to the fact that he cannot always find such a precedent as he needs.

It is usually suppurative in character, but a cure may be effected by absorption, even after a distinct tumor is formed. Of the causes of this disease but little can be said. It may result from traumatism, foreign bodies, extension of adjacent inflammatory processes, or any structural disease involving the mucous membrane of the rectum. The manner of its extension and the course of the morbid processes excited, are identical with those seen in perityphlitis following typhlitis.

The prognosis depends much upon the time when the case is diagnosed, the treatment of both the inflammation and the abscess as well as the physical condition of the patient. When the vitality is low, and the abscess high up in the pelvic cavity, or when the patient is tuberculous it is unfavorable; when otherwise, we may hope for recovery. The diagnostic symptoms and the treatment I will give in connection with the following case.

CASE I. Mr. G. B. A., aged 37, weight 200 lbs., very muscular and stout. On the 26th of January last he applied to me for treatment, stating that he had "piles;" that he was going to visit a sick relative in North Georgia, and would be gone two weeks; presuming that he knew his trouble, and without any examination, I gave him the usual prescription to regulate the bowels and an ointment for the hemorrhoids.

On the 18th day of February, I was called and found my patient in bed with a temperature of 102°, suffering with intense pain in and around the rectum; with tenderness of the whole pelvic region. On inquiry he gave me the following history:

On the 6th day of January last, while in the act of defecating, a severe pain was felt low down in the pelvic cavity on the left side, which continued daily, and which was always worse when bowels moved or during exercise. During his entire visit the pain was incessant. The medicine prescribed by me failed to relieve him, and, while riding on the cars, he was unable to sit erect, owing to the pain it caused him. Having carefully examined him, I found some induration of tissue and slight swelling, with heat and much tenderness, below Poupart's ligament on the left side. The sphincter muscles appeared to be spasmodically contracted and the tenderness around the anus was so great that I could not by the use of a 4 per cent. solution of cocaine introduce my finger into the rectum.

For this condition I advised rest in bed, and gave for the pain, morphine and atrophia hypodermically; for the fever, phenacetine and quinine; for the bowels, solution of sulphate magnesia with aromatic syrup of rheubarb and enemata of warm water; for the tumor, I applied warm fomentations.

February 19th and 20th the swelling in left side gradually increased until a tumor as large as a walnut could be distinctly outlined, for which I applied warm starch poultices every two hours. On the morning of February 21st, I discovered that the tumor had greatly diminished. In the evening, with the assistance of Drs. McCrimmon and Summerlin, I made a careful examination, under an anæsthetic, both digitally and through a rectal speculum and could discover no signs of a tumor or abscess except the inflammation. During the next three days, the inflammation increased, the pain became more severe, attended with constitutional depression and inability to urinate.

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*Read before the Georgia State Medical Association, 1893.

February 25th, assisted by Drs. Rogers and Summerlin, I again anæsthetized the patient, and with difficulty I felt the lower edge of a fluctuating tumor protruding into the bowel at the apex of the ischio-rectal fossa, which probably pressed upon the urethra and rendered it necessary for me to use the catheter to empty the bladder.

With the index finger of my left hand resting against the edge of the tumor, through the rectum, I passed a medium sized trochar parallel with the bowel straight up for four inches. The opening was then enlarged with a long bistoury and a pair of dressing forceps. Almost a half pint of foul looking pus escaped, having the odor of fæcal matter. The abscess cavity was then cleaned out, and iodoform gauze introduced and the part dressed with absorbent cotton. From the time the operation was performed the abscess discharged freely until the 28th, at which time the gauze came out and with difficulty more was introduced, owing to resistance on the part of the patient. During this time the patient was restricted to fluid diet and a tonic of iron and arsenic with quinine administered. On March the 4th, I introduced a small rubber tube in place of the gauze, which was necessitated by the healing of the wound.

On March 8th, the discharge had about ceased, and the opening to the abscess closed. The patient was suffering with pain, attended with fever and the presence of former symptoms, which increased until the 10th. At this time, assisted by Drs. Rogers and McLeod, I reopened the abscess, with my finger removed all septa of broken down tissue, and washed out the entire abscess cavity with an antiseptic solution of carbolic acid. A soft rubber drainage tube was introduced and the parts dressed as before.

The abscess discharged freely and patient slowly convalesced, but on March 14th, it was discovered that the water injected into the rectum partly passed out at the tube through the abscess.

At this stage of the case my judgment was severely tried to decide whether to subject my patient, who was at this time very weak, the fourth time to the depressing effects of an anæsthetic and sever such important structures as existed between the two openings, or wait for the abscess to heal and then operate for the fistula.

At the suggestion of an experienced surgeon, I waited, and to my pleasant surprise my patient is now able to be with me in this city and is well of both abscess and fistula without an operation.

I report this case hoping that, by so doing, I may be the means of relieving suffering humanity in similar cases through the agency of some one or more of my professional brethren. I believe it would have been better surgery for me to have opened the abscess through the rectum and I know it would have been better when I first opened the abscess to have made the incision larger and removed all septa of broken down tissue.

HEADACHE VERSUS GLAUCOMA.*

W. L. BULLARD, M. D., Columbus, Georgia.

"These medical sciences stand at a stay, and have done for years," so said Lord Bacon in the sixteenth century. But, could he step forward to-day and look over the literature that has been produced and brought forward relative to my theme, I am quite sanguine that this rare philosopher would change his assertion, partly at least to say that medical science is still a little slow in finding any one remedy as a certain relief for all kinds of headache, but it has reached the highest pinnacle of fame as to cause. The wise men tell us of an anemic, an hyperemic, or congestive, a nervous or cerebral, the toxic, and the bilious or sick headache, all of which have an abundance of causes. The oculists say that most cases are caused from eye strain, but the gynecologist goes the eye specialist one better, and swears that nearly every case is reflected from uterine or ovarian irritation, while not a few cases are doubtless caused from urethral contraction, and syphilitic lesion of the brain or nervous system, so says the genito-urinary surgeon, and the general practitioner knows full well that nine cases out of ten are caused from a torpid liver or a gastro-duodenal catarrh. Now, gentlemen, ignoring every form of which we have spoken, including the headache the most of us will have the morning following the banquet, I will proceed to tell you of the kind of headache I wish to call your attention to, which is a headache, or possibly more often called neuralgia, a pain caused from and a symptom of a most serious disease of the eye—glaucoma. We have the acute and chronic; in the acute the eye ball becomes red and very much inflamed, with a hard tension of the ball as to touch, a dilated pupil, deep anterior chamber, and a cloudy condition of the aqueous humor and vitreous body accompanied with nausea and vomiting, at times pronounced as a bilious attack. A patient with this kind of headache or neuralgia, suffers at times with the most intense pain extending into the eye from the brow on the nasal side with an œdematous condition of the lid. In the chronic form, it sometimes runs its whole course without causing any excessive degree of redness or inflammatory condition of the ball, and the vitreous and aqueous humors are transparent, rendering necessary an ophthalmoscopic examination with which the pathognomonic excavation of the optic nerve may be readily seen; yet the patient at times suffers intense supra-orbital pain. The storm after a day or so may pass off, but is sure to return at shorter or longer intervals, and the intra-occular tension slowly, but surely, does its destructive work upon the optic nerve fibres until the "windows of the soul" are forever closed. In true supra-orbital neuralgia or, as it is designated by the laity, "sun pain," the suffering is quite severe, the ball red and the supra-orbital notch very sensitive to the touch, but the pain is paroxysmal, beginning in the morning after sunrise, increasing for a few hours, and gradually subsiding in the afternoon before sunset, to begin the next morning possibly a little later than it did on the preceding day. You will find the vision not impaired, the cornea clear, the pupil normal in size and readily responding to the influence of light, which is not the case in the glaucomatous form of headache, and under the treatment of antipyrine, quinine and arsenic the paroxysm is soon checked or broken. While there is some similarity between the two diseases, the differential diagnosis is easily established, yet I am afraid that most physicians have no idea how many human beings are to-day from a mistaken diagnosis, groping their way with vision irretrievably lost, and the victim left as in Milton's soliloquy.

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* Read before Georgia State Medical Association, April 21, 1893.

I only wish that I was able to protray to your minds the true realities of which I speak. In an effort to do so, allow me to quote from a lecture delivered at the Chicago Policlinic by that eminent Chicago oculist, Dr. F. C. Hotz: "Gentlemen, it is the fact that the severe neuralgic pain, and the violent gastric disturbances, induced by acute glaucoma, have been taken and treated for "rheumatic or malarial" neuralgia, while the ocular disease has not been recognized until too late. I have seen several cases of this mistake; one was an especially sad case which impressed me so much that I shall never be able to efface its picture from my memory. Though fifteen years have gone by since I have seen the unfortunate patient, her image is before me now as vivid and distinct as if I had seen her yesterday. Two months before I saw her she had been seized with fever, nausea, frequent vomiting, and violent pain extending over the entire left side of the head. Her physician pronounced her trouble to be gastritis, and "sick headache," and when the old lady called his attention to the fact that her sight was getting poorer every day (and she could see with her left eye only; for the sight of the right eye had been destroyed by glaucoma ten years) he assured her she need not worry about it; that her sight would return as soon as the stomach trouble was cured, and the neuralgia in the head relieved. Having implicit confidence in her physician she believed his word, and though her sight soon had vanished completely, she waited hopefully for the day when the darkness would be lifted again from her eyes, and patiently endured the constant, most violent headache, which robbed her of rest and sleep by day and night. For two weary months this poor woman suffered, and hoped; but then her patience was exhausted and much against the will of her physician she went to consult an oculist. Poor woman! it was too late. The continued high tension of glaucoma had done its deadly work upon the optic nerve too truly, and although the iridectomy effectually reduced the intra-ocular tension, and promptly relieved the patient of the terrible headache so that after the operation she could enjoy a good quiet sleep for the first time in eight weeks, the woman has never seen a ray of light since the awful result of a mistaken diagnosis." Now, gentlemen, I venture the assertion that there is not an oculist of any experience, so to speak, who has not seen cases similar to the one just quoted, and I will quote from a letter bearing on this subject received since I commenced to write this paper. It is by Mr. J. M. Floyd, of Fayetteville, Ala., who says that: "I write you concerning my wife, who has been blind for two years. She is fifty-seven years old; in very good health. About three years ago she was taken with neuralgia in the head, which settled in her eyes; the misery was very intense for some months, after which she became nearly blind. She lost all sight about six months afterward. I took her to an oculist who pronounced it glaucoma, and told her that he could do her no good." Now, I don't know the cause of the delay in this case but am sanguine to say that had there not been a mistaken diagnosis the delay would not have happened, and to-day there would have been one less blind person groping about in the long dark night. May I ask why this mistaken diagnosis? Is it from the fact that we become careless in making our examination, and take too much for granted in what our patient tells us? In truth sometimes do we let the patient make the diagnosis? But who is responsible? The diagnosis is correctly made, the only remedy is the surgeons knife, and the sooner the iridectomy is done the greater the chances for the restoration of vision. No known medical treatment, including Dr. Hammond's cerebrine and medulline, can permanently stay the disease. Physostigma and pilocarpine will check the destructive ravages for a time, giving the afflicted some chance until the surgeon can be seen. Preparations of belladonna, and erythroxylon cocoa which includes cocaine, should never under any circumstances be used in glaucomatous headache, and permanent good need not be expected from any treatment save an iridectomy, as advised by Dr. Græfe some years ago, and which I must add, is one of the grandest triumphs of modern surgery.

SOCIETY REPORTS.

STATED MEETING OF THE CLINICAL SOCIETY OF LOUISVILLE.

Meeting, April 18th, 1893.

DR. JOHN G. CECIL, PRESIDENT, pro. tem. in the Chair.

TWISTED UMBILICAL CORD, CAUSING DEATH OF FŒTUS AT SEVENTH MONTH.

DR. P. GUNTERMAN: I have a specimen here which is very small and seemingly very insignificant; still it caused the death of a baby. A woman came to my office about two months ago, who was then seven months advanced in pregnancy. The day previous to her visit to my office she sustained a severe fall; however, she said that she got up and went about her work not feeling any serious inconvenience, but from that time she has not noticed any movement of the child. As there were no distressing or unusual symptoms, I advised her to let matters take their course and await results. She went on in that way until about ten days ago, when I was called in the evening to deliver her. I found her in labor, the bag of waters protruding and the os well dilated; found a small head presenting; ruptured the bag of waters and there was but a small quantity, 1½ pints to a quart all together, which was clear and not fetid. Delivery was accomplished without difficulty and the placenta came away promptly. I found that the baby was dead, probably at about the seventh month, but was not macerated. When I tied off the cord I noticed close to the body a shriveling of the cord; upon closer examination I found this little specimen and cut it off. Evidently the child had died from the effects of the mother's fall, making several turns, twisting the cord close to the abdomen and the constriction thus produced stopped the circulation.

P. Gunterman, M. D., then read a paper on

CHLOROFORM ANÆSTHESIA AND ITS ADMINISTRATION: PART SECOND.

At the previous meeting I had the pleasure of reading about the administration of chloroform. Purposely the anæsthesia from ether was not touched upon. Ether has been used by me comparatively but a few times; chloroform quite frequently. And since these remarks are made mainly to solicit discussion, there is no reason why the ether question might not be also discussed.

The remarks this evening having been very hastily jotted down, only, to my mind, the most salient points have been considered.

Chloroform, if it does kill, does so either abruptly and suddenly or gradually and by degrees. Chloroform is an irritant specific narcotic, one of great diffusibility and capable of quick and excessive action. On the other hand it is progressive in its action, and when administered in proper dose, gradually, the patient is not apt to die from an overdose, but if he does the end may not come so slow as from other narcotics and as from ether.

A person to be chloroformed and made ready for an operation is naturally often unduly excited, because of the chloroform and because of the operation. Such a state of mind is very dangerous and great caution ought to be exercised less we have spasms of the respiratory muscles, failure of respiration from paralysis or syncope. Death may come after the first few whiffs or later, sometimes even after the administration has long ceased and the patient is thought to be recovering. Strong, healthy and robust (especially stout) people who take chloroform for the relief of pain from small troubles, are prone to have syncope. People otherwise constituted, when given chloroform for a short time and short of abolishing completely actual pain, do not often, if ever, have fatal syncope.

We must, as stated the other night, pay close attention to breathing, pulse, the reflexes and the approach of cerebral anæmia. Danger is near from this last source when you notice a peculiar pallor of the face and particularly about the lips, which are firmly drawn, so as to expose the teeth, and give to the countenance a most ghastly expression. The operator may notice, before the chloroformist, that the patient is in danger when the flow from the bleeding artery stops. Change in respiration, faltering of the pulse, and unusual and persistent dilitation of the pupils are indicators of danger. It is said that a patient under the influence of an anæsthetic is at the threshold of death, and a very insignificant peculiarity of his may settle his fate. They do, however, not all die from the effects of the anæsthetic, at any rate conclusive proofs fail as yet. On the other hand people have died on the operating table who have taken no anæsthetic. A patient who dies while taking chloroform may die from other causes.

Patients may die under anæsthesia from heart failure, by paralysis of the respiratory centers, from cerebral anæmia, and from shock. Deaths from heart failure and cerebral anæmia are perhaps the most frequent. If chloroform is to be blamed for all the mishaps ascribed to it, how do we explain the fact that, of the hundreds of thousounds of parturient women, who have taken it, not a single authentic fatal case is on record. It is claimed that their state of mind just fits them for taking the chloroform, that they just suffer enough pain to prevent syncope and that straining at every succeeding pain keeps the brain well supplied with blood. Such is good reasoning. We might, perhaps, conjecture that it is ordained by an all-wise Providence, who is said to have condemned woman to bear her children in pain and agony. These facts ought to serve as proof, to an unbiased mind, that other agencies and conditions are at work to make chloroform—if you will, any anæsthetic—a bugbear to the operator and cause unjust censure to the administrator for mishaps.

If now accidents do occur, as they have done heretofore, be calm, be cool, be collected, and be deliberate. Have your means of resuscitation at hand. Have your stimulants, brandy, ammonia, nitrate of amyl and nitro glycerine, have your hot bottles and by all means your battery. Be ready to institute vigorous and prolonged artificial respiration. Pull the chin forwards, upwards and with it the head backwards and forcibly draw the tongue forwards. If this mild form of artificial respiration does not succeed use any of the other established methods. Electricity is the great mover and stimulator of the respiratory muscles and nerves, and quite a number of cases are on record where its proper use brought about the desired result. Laryngotomy has been done to re-establish respiration. To relieve anæmia of the brain, reverse the condition of affairs and put your subject in the perpendicular (almost) with the head down. Twice have I seen life come back in a body breathless, pulseless, and apparently dead. Men of worth have fought this method and others as warmly defended it.

Permit me a little pleading for small stimulating doses of morphia, atropia, either—all things being equal—before or after the administration of chloroform. They may produce a general quietude, they may stimulate the heart's action and raise the blood pressure sufficiently, perhaps, to overcome undue depression from the chloroform.

In conclusion: Whenever it becomes necessary to use means of revival be persistant, methodical and—keep on.

DISCUSSION.

Dr. Wm. Cheatham: It is a fact that we do have deaths occasionally from chloroform in the hands of the most careful men, men who make a specialty of anæsthesia. For instance in England, you can refer to almost any issue of the *London Lancet* and it is not an uncommon thing to find from one to five deaths recorded from chloroform, in charge of those making a specialty of this work, showing that there is danger in chloroform outside of the administrator.

As to the method of death: I believe the rule is that patients dying from chloroform anæsthesia die suddenly and we have no time to make an effort at resuscitation. The two facts that we do have deaths from chloroform in the hands of careful, experienced men, and that such deaths are generally sudden, I think is against its administration. On the other side, you take ether in the hands of a man who is accustomed to giving it and if there is any trouble from its administration it comes on in such a manner as to give a man time to make an effort to save his patient. Some years ago I gave ether for a gentleman in New York, and the patient came near dying three days afterward from kidney complication. He was taken sick immediately after the administration of ether and was in a serious condition for three days, then made a good recovery. With chloroform, should there have been trouble, death would likely have come suddenly, and we would have had no time to make an effort to save the patient. In view of these facts I think ether the safest anæsthetic of the two. We have had in this city within the last year, I understand, six deaths from chloroform, all of them occurring before any instrument was used, while preparations were being made for the operation. Some years ago I saw in the city hospital a man who had taken chloroform eighteen times before for the same trouble, (dislocated shoulder) and the nineteenth time he died; death was sudden after taking only a few whiffs of chloroform.

In my practice I use, as you know, very little general anæsthesia, and in recent years I have not had much experience in the use of either chloroform or ether. However, with over three years' experience in the New York Hospital, giving ether three or four times per day, I only saw one accident. Some men admit that the reason they advise against the use of ether is not that it is more dangerous than chloroform, but because it is more disagreeable to the patient. While there may have been some cases where nausea was attributable to ether, still I believe if it is thoroughly watched you are no more liable to have nausea from it than from chloroform.

Dr. A. M. Vance: I think one of the most important parts of surgical work is the consideration and choice of an anæsthetic and the person who shall administer it. I know of no other element in the life of a surgeon that gives him more anxiety and more trouble. I use both ether and chloroform, and my choice, except where there are special indications for giving one or the other, is governed entirely by the man who is to administer the anæsthetic. There are men who know how to give chloroform, who practically know nothing in the world about giving ether, and vice versa. Therefore, I think in general surgical practice when we have a man as anæsthetist who knows how to give chloroform and does not know how to give ether, our choice should be chloroform. On the other hand, if we have an anæsthetist who is perfectly familiar with the giving of ether and does not know how to give chloroform, we ought to strain a point in favor of ether, or get somebody else to administer the anæsthetic. I think it is the duty of every operator to require the patient to admit a man of experience as anæsthetist, and we ought as operators to demand a remuneration for that service. I have never seen a death from anæsthetic, that is one that I could say was directly caused from the administration of either chloroform or ether. I have had two deaths on the table in my whole experience, both of which I believe were caused by shock. Both patients were women, one an old lady who had cancer of the lower jaw—a very horrible condition; she was a horror to herself as well as to all her friends; the tumor was protruding from her mouth, producing a condition of druling which was horrible in the extreme; she died just at the close of the excision of that part of the jaw including the growth. Post mortem examination revealed the fact that she had a metastatic condition of the mesenteric glands, liver and probably of the kidneys. She failed to take any stimulation prior to operation, which was advised. The other was a younger women who took ether; the operation was abdominal hysterectomy; patient died just at close of the operation. I want to mention one other case that died a few days after operation for ventral hernia. This patient had slight bronchial trouble; she had been subject of four or five attacks of pneumonia and had lateral curvature. She died three days after the operation from a septic condition seemingly due to the large accumulation of pus apparently in the bronchus, the abdominal wound doing nicely.

Dr. Gunterman's remarks as to the responsibility are not carried out by my experience or by what I have heard in discussions of this matter. He speaks of the anæsthetist being blamed or held accountable for the results in these cases. I think the anæsthetist is rarely blamed for accidents of this character, but the operator is the man who bears the brunt of responsibility. This is very natural, because people look to him for the final outcome of the case. I agree perfectly with Dr. Gunterman that where we have fear and excitement on part of the patient in regard to taking chloroform, we are more liable to have trouble. My experience has been that the administration of morphine or atropine, morphine especially, has some disadvantages. The patient is a longer time in waking up usually and though the condition may be good, it causes a great deal of anxiety on the part of the family and retains the physician there a long time, where it really is unnecessary. I question whether whiskey given with atropine would not be better—I always give whiskey hypodermatically during the operation if at all indicated; rarely give by the mouth before hand.

I also disagree with Dr. Gunterman in the statement that operations done under partial anæsthesia are usually followed by no aggravated symptoms. My experience is that these cases often have more depression and more shock than those where complete anæsthesia is present. It is better to give the anæsthetic to completion rather than do an operation under primary or partial anæsthesia. I would like to emphasize the statement that I think it is our duty, as operators, to require the employment of a man recognized as an anæsthetist, so it may be said, if we do lose a patient, that we had a man of experience for the administration of the anæsthetic, although it may sometimes offend the family doctor or patient who has chosen the administrator of chloroform because of friendliness; this is often the cause of complications, owing to inexperience or lack of knowledge of many men in the administration of chloroform. I think the choice of an anæsthetic should be to the greatest degree determined by the experience of the man whom you are obliged to accept as an anæsthetist, being of course governed to the proper extent by the special indications in each case; all patients having suspicion of lung or kidney trouble being given chloroform, all those having heart troubles being given ether.

DR. J. M. KRIM: My experience in this direction has been almost entirely with chloroform. I have never seen any unpleasant symptoms, excepting in one case, and have had no deaths. I have had little or no experience with ether, and cannot see why it should be perferable to chloroform. Of course the majority of cases in which I have had occasion to use chloroform have been obstetrical cases.

In regard to a special anæsthetist: We are very frequently placed in a position where it is impossible to obtain such a person, and we have to accept just such assistance as we are able to secure. I have often started the anæsthetic and let a midwife or some one else finish it. Fortunately, I have never had an accident, but of course no one can tell how soon it will come.

DR. GEO. W. GRIFFITHS: I am still a strong advocate of chloroform as against ether. I cannot give statistics, but as stated at the last meeting of this society, I saw chloroform administered to hundreds and hundreds of men in the late war with only one death that could possibly be attributed to the anæsthetic.

There is one very important point that Dr. Gunterman did not mention in his paper, that is to have blocks or bricks in the room to elevate the table at the foot. I know at the Sts. Mary and Elizabeth Hospital I came very near losing a case that I was about to operate on, some time ago, owing to delay in procuring something with which the table could be elevated in this way. Now we have very high blocks always ready to be placed under the table, which very materially lessens the danger. It may be that I am wedded to chloroform because I have had very little experience with ether. I must admit that since I have seen Dr. Guest administer ether on a great many occasions, I am more favorably inclined toward its use than ever before.

In regard to the deaths that have occurred in this city recently and elsewhere: It is barely possible that the chloroform might be blamed for it, on account of some impurity. We were preparing to operate some time ago, Dr. Guest will remember the case, and sending to the drug store for ether, they sent us chloroform. It is probable if Dr. Guest had administered the chloroform in the same manner that ether is given (excluding the air), the patient would have been dead. It was a first class druggist or drug store that sent us the chloroform, and his excuse afterwards was that he "did not have any ether, and chloroform was just as good." You must analyze the whole thing, take into consideration the various advantages and disadvantages, previous health, surroundings and everything of that kind in making up your statistics in your condemnation of chloroform.

As far as having a special man to administer the anæsthetic is concerned: This would be impossible in some of my work. My operations are largely "emergency surgery" and I have to pick up the most suitable person I can to give the anæsthetic. However, I think we ought always to agree upon a special man to do that work in the city, where it is possible.

DR. P. F. BARBOUR: I believe most of the points have been covered in the discussion this evening and two weeks ago. I believe in children, especially young children, chloroform should be used, as it is much safer than ether. In obstetrical cases chloroform should be used; it is very much pleasanter and is not objectionable on account of danger.

Where you have light or heat from a stove near the operation chloroform is indicated, but recent investigations tend to show that chloroform is not entirely safe in close proximity to a flame. The burning of a candle, for instance, seems to convert chloroform into hydrochloric acid and lower chlorides of methane which produce intense irritation of the bronchial membranes, affecting the operator as well as the patient. There are several cases of that kind on record. In military service, I suppose chloroform is much the better because you can work very much more rapidly with it; it is much easier to carry around, and is perhaps safer, as you have not time to inquire whether the patient has kidney, lung and brain trouble.

I would like to call attention to the method McBurney has suggested for giving chloroform or ether; that is by putting an Esmarch bandage around the limbs and in that way the ether or chloroform is absorbed by only a certain portion of the blood, then when you remove the ligature you have a fresh supply of blood, the patient comes out from under the anæsethetic very quickly, and it also has the advantage that patients can be gotten under the influence of the anæsthetic very rapidly. I saw McBurney put one patient thoroughly under the influence of an anæsthetic in two minutes, and she came out in about the same time.

In regard to the treatment of chloroform poisoning: Electricity of course, is good, also alcohol and digitalis. I prefer strophanthus to digitalis as it is much more rapid in its action. Dr. Gunterman failed to mention one very important aid in the treatment of chloroform poisoning and that is hot applications over the heart; nothing stimulates the heart so much as hot applications.

Speaking of children: I saw Dr. Abbe operate upon a child aged twenty months, in New York, for sarcoma of the kidney using ether as an anæsthetic. I have always thought that was placing the child in very great risk of its life. It had only one kidney by which to eliminate the ether, and it seems to me a strong objection could be raised against the use of ether in cases of that kind. I do not know the subsequent history of the case.

Dr. J. W. Guest (Visiting): All the accidents I have seen from chloroform anæsthesia, which numbered seven and one death, have been very rapidly produced, and I believe this is the rule. In regard to the six cases, referred to by Dr. Cheatham, that died before a knife was used: I do not know of the other five, but do know of one. In this case the operation was completed and the chloroform cone thrown away thirty seconds or more before any serious symptoms were noticed. All at once the heart began to fail and, although every effort was made to save the patient, she died very quickly, and from cessation of the heart's action. Her respiration continued good for several seconds.

Dr. A. M. Vance: Was the patient thoroughly under the influence of the anæsthetic at the time of the operation?

Dr. J. W. Guest: Her conjunctival reflexes had disappeared, stertorous breathing supervened and she was apparently sufficiently anæsthetized for any operation. In fact, she was more thoroughly anæsthetized than the majority of cases to which I administer an anæsthetic, yet not profoundly under it, for during the divulsion she evinced a slight pain.

I believe Dr. Gunterman, in his paper, stated that oftentimes the operator would notice serious symptoms even before the anæsthetist. I can scarcely conceive how this could be if the operator is absorbed in his work and the anæsthetist in his, unless purely accidental. It is usually the case that the anæsthetist is the first to detect serious or unusual symptoms of the heart or respiration, which are not noticed by the operator until his attention is called to them.

I am not an advocate of chloroform, neither am I a confirmed advocate of ether, but believe each case should receive a careful examination and the anæsthetic selected which is most suited to the case. I believe, that in time, other anæsthetics will be discovered which will be found more suitable to certain conditions in life than those we are now using, just as morphine has given way to other drugs. Of course, morphine is still preferable in some conditions, while in other cases there are other drugs which give us better results. I do not think we have a right to say that we will give chloroform or ether, irrespective of the patient's physical condition, surroundings or of consequences. There are many things to be considered. I believe, however, the majority of patients will take ether better and that ether is more suited to the majority of patients than chloroform, especially in extended operations, because it produces by far the less shock and gives the patient a better power of surgical resistance by stimulating, instead of depressing, the system as with chloroform. I want to record myself as believing that chloroform is contra-indicated in every case where ether is not. We should give our patients every possible chance of a safe anæsthesia, and, in view of all statistics collected, I do not see that we can claim that for chloroform. Julliard, of Geneva, in his statistics, reports one death from anæsthesia in 3258 cases where chloroform was used, and one death in 14,987 cases where ether was employed. Nearly five deaths from chloroform to one of ether, and still there are some who claim that chloroform is the safer anæsthetic. In chloroform anæsthesia we often hear of serious accidents and difficult resuscitations; where ether is used we seldom hear of these, and yet these accidents are never considered in compiling statistics.

DR. JNO. CECIL: I feel the burden of responsibility in cases of anæsthesia with any kind of anæsthetic, about as much as in any other situation that comes up in the practice of medicine or surgery. For that reason, I believe the anæsthesia should be in the hands of a competent and experienced person, and he should be well paid for his services. I am inclined to believe that for general anæsthesia, ether is the safer. I do not very well see how we can get around the statistics on this subject, and as has already been mentioned, the method of death and our ability to cope with it, makes ether the safer anæsthetic. Of course, there are always certain general indications to be taken into consideration in the choice of an anæsthetic, but all things being equal I believe ether should have preference. In the majority of obstetrical cases I think chloroform is the safer. Ether, because of its stimulating properties, should be used in the management of cases of severe hemorrhage where any anæsthetic is required. I am inclined to believe there is more danger in the administration of chloroform in obstetrical practice than is usually accorded, and unless I am mistaken, Lusk, in his recent work, reports several cases of death from chloroform in connection with obstetrical work.

The different points have been so thoroughly discussed, that it is unnecessary for me to repeat anything that has been said, but since the last meeting of this society I have had an experience with chloroform that has been the source of considerable anxiety. The case briefly is this: Last Friday, Dr. Frank asked me to see a lady about twenty-five or thirty years of age, who had had a miscarriage and had subsequent hemorrhages more or less profuse in quantity. The patient was the mother of two children. She had some suspicion of lung trouble, perhaps development of phthisis, not well-marked. The patient when I saw her, seemed to be apparently well nourished, color fairly good, considering the quantity of blood which had been lost in several hemorrhages previous to my seeing her. I advised curetting of the uterus; she had been delivered with forceps and had had one previous curetting for some trouble following an abortion a year or so ago, and had conceived a most intense fear of all instruments. I thought a blunt curette would answer every purpose and told her that I believed such trouble as existed inside the womb might be relieved by this means without the administration of an anæsthetic. We found, however, that we could not proceed until we had given an anæsthetic. I had a bottle of chloroform which I had reason to believe was Squibb's chloroform for anæsthesia, bought from a careful druggist. Dr. Frank proceeded to administer this chloroform, giving it to complete anæsthesia; I will say, however, I introduced the speculum and was making the necessary preparations for curetting before she was completely under the anæsthetic, but nothing was done in the way of curettage until she was well under the influence of chloroform. I proceeded as rapidly as possible to curette every part of the uterus, the operation probably not occupying more than seven minutes, but before I had finished the work to my entire satisfaction, Dr. Frank called my attention to the fact that the patient was not doing well, stating that she had ceased to breathe. I asked him the condition of the pulse, and he said then it was fairly good. I immediately withdrew the speculum and curette, and found her with a very weak pulse, perhaps 120 to the minute, and not breathing at all. I had seen people stop breathing and was not particularly anxious about it, but concluded to suspend operations until we could revive her. We grasped the patient each by one arm and leg and let her head drop over the edge of the bed when she immediately gasped and commenced to breathe from that time. After straightening her around on the bed, I felt the pulse and found it much better, probably beating at the rate of 100 or 110 and pretty fair in volume, and again I felt relieved as to the situation, concluding that it was simply one of those little fainting spells which sometimes occur under anæsthesia and was about to proceed when I noticed that she had ceased to breathe again; she would take one deep breath then respiration would cease for half a minute, or perhaps a minute. The most remarkable thing about it was the pulse ranging from 100 to 150 per minute, it would change from a full round soft pulse in two minutes to a very weak, thready or rapid pulse. This thing kept up and we immediately commenced the administration of restoratives, giving her atropine first in $\frac{1}{100}$th grain dose, which had no beneficial effect, then in two or three minutes we gave her nitro glycerine and digitaline in the same hypodermic, keeping up artificial respiration. Every little while we would tip her over the side of the bed and each time would be rewarded by seeing her come around very promptly, but in a few minutes she would cease to breathe again, and the pulse would likewise fail. We then gave her a hypodermic injection of brandy and placed hot bottles around her. This kind of treatment was persevered in for one and one-half hours before we could safely leave the patient; we finally did leave her in very good condition and had no further trouble in the case.

In my judgment, that woman came very near dying from chloroform, and we afterward learned that on the previous occasion, when Dr. Cartledge did the curetting, she had taken chloroform very badly and had experienced a number of fainting spells afterward. I have often seen irregular respiration under chloroform, but I have never seen the pulse vary as it did in this case. This patient seemed to be in more danger from respiration than from the heart. I simply mention the case as one which struck me as dangerous for the administration of chloroform, and one in which there will be danger every time she takes it. I do not know how ether would do in such a case.

DR. GUNTERMAN: I favor chloroform simply by preference. I use it a great deal oftener than ether. As far as I can see, it is utterly impossible to make accurate statistics as to the fatality of ether and chloroform, comparatively. There are for instance, forty thousand cases given by Nusbaum that are never taken into consideration in making up statistics; there are thirty-eight thousand cases of Esmarch's, and a great many others that reach into the thousands, that have never been considered in making up statistics; there are a great number of cases given by the ordinary physician, and by the small surgeons like myself, which are of course, not considered in statistics.

As to having a special man for this particular work: I said in my first paper that I did not advocate a specialist, but I said at the same time that every physician ought to be thoroughly informed as to how to give it or any other anæsthetic.

In regard to Dr. Vance's remarks that the operator rather than the anæsthetist bears the blame in case of an accident, I must differ: I have seen but one death from chloroform and that was many years ago. Dr. Cowling was the anæsthetist and Dr. Bayless the operator. The patient died very quickly after a few whiffs of chloroform. In this case, the adminstrator of the anæsthetic had to bear the entire burden of responsibility.

Another remark made by Dr. Vance of not giving morphine or atropine as a stimulant in these cases: I must differ with him in this, but I believe these drugs should be given in very small doses, just enough to stimulate the circulation or its action, just enough to produce a little quiet and not sufficient to produce prolonged sleep and in this way prevent us from seeing how our patient is coming from under the anæsthetic.

As to hemorrhage in obstetrical cases: I am satisfied that when you give chloroform in obstetric cases you always have a greater amount of hemorrhage than without it; where there is any danger of hemorrhage, where you suspect it, whether it be placenta previa or some peculiar condition of the woman, if an anæsthetic is to be given, let it be ether by all means.

QUITE a sensation has recently been made in Boston by the successful application of wool-fat, or agnine, to the skin, for the removal of wrinkles. When applied with rubbing, it passes directly through the skin and acts as a nutrient to the fatty tissues beneath. An ancient dame has succeeded in removing nearly all the crows-feet from around her temple, and the remedy is fast becoming very popular.

The washing of the parts with ether is said to be a rapid and complete method of destroying pediculi pubis.

If you had to go to Heaven on the testimony of your dressmaker could you do it?

He who would be strong in mind must have facts for his diet.

THE MEDICO-CHIRURGICAL SOCIETY OF LOUISVILLE.

Stated Meeting May 12th, 1893.

The President, Dr. F. C. Simpson, in the chair.

Dr. T. H. Stucky: In making my round at the City Hospital this afternoon, I found this patient and the case struck me as being one of considerable interest, especially as to the diagnosis which seems to be very obscure. I will read the history as entered in the Hospital record by Dr. Rousey the Interne.

"J. R., residence Louisville, occupation baker; age fifty years. Father dead; cause unknown; mother died of old age. Number in family five, health good. On or about April 1st, was taken with vomiting and pain in the epigastric and hypochondriac regions; bowels regular at this time, but since has had alternate diarrhœa and constipation; stools yellowish brown, high colored. For last three weeks has been worse and noticed tumor in left hypochondriac and epigastric regions; suffered from insomnia, anorexia, coated, flabby tongue. Entered Hospital May 10th; temperature 101½° F; pulse 110; complained of headache and pain in abdomen. On examination found tumor which could be easily outlined by palpitation. When lying on back could easily detect pulsation synchronous with heart beat; tumor movable and gives apparent fluctuation; flatness on percusion; auscultation negative, unless lying on the back, then a transmitted bruit is given. Treatment, salines with big enemas; bowels moved well but not effecting the size or shape of the tumor."

This case seems to me to be of unusual interest. The tumor is very marked; was first noticed about six weeks ago, having grown very rapidly since. There is no history of jaundice.

Dr. A. M. Vance: I think there is an accumulation of fluid, either a cyst or abscess of the liver. I hardly think it the gall bladder.

Dr. A. M. Cartledge: I think there can be no doubt about this being the gall bladder distended with mucus and probably a little bile. It has every evidence of this trouble, tense feeling, fluctuation, etc. and besides it is pretty near the region of the gall bladder, reaching up nearly to the notch in the liver. Ten or twelve weeks ago, I had a case which somewhat resembled this one, except that it did not have the appearance of being cystic as this has. I made the diagnosis of distended gall bladder, cut down upon it and found it was a soft tumor of the omentum. I took out a section of it and the diagnosis was made, by the microscopist, of sarcoma. The most remarkable feature about that case is that the man has steadily improved since the operation, has gained in flesh and really looks as though he was going to get well. The wound closed without any trouble.

Dr. D. T. Smith: It seems to me that the tumor produced by a distended gall bladder would not have so sharp a contour in that position. Again, the other evidences, such as obstructed flow of bile, etc. are not present. There was a case in the City Hospital some years ago, when I was in attendance there, in which some distinguished physicians made an examination and every one of us missed the diagnosis. There was a tumor in the epigastric region and it looked very much like the case before us to-night. Aspiration was practiced on one or two occasions. The man died a few days afterward and the trouble turned out to be an abscess of the left lobe of the liver. I am rather inclined to that opinion in this case, although we know how liable we are to be mistaken in such a condition.

Dr. Dixon (visiting): The case is one of great interest to me. The tumor evidently seems connected with the liver in some way. I do not think it is the gall bladder. I had a similar case in the person of a lady in our town, in which the tumor disappeared under purgative treatment and local applications of iodine. The tumor reappeared, I think, the third time, and each time disappeared under purgation and local applications of iodine. I examined her under an anæsthetic and could trace the tumor up to the notch of the liver, and I am almost certain it was not the gall bladder, neither do I think it was an abscess of the liver. In the case before us I think the trouble is probably abscess of the liver.

Dr. T. H. Stucky: I would like to have had some suggestions as to treatment in this case, whether it would be considered strictly surgical, whether it would be best to aspirate, perform a laparotomy at once, or further try the saline treatment. He was placed upon salines on the night of the 10th instant, which has produced no material change in the stools as to color or character. They have been a little more frequent and more watery. The question with me was whether it is strictly a surgical or medical case.

Dr. J. B. Marvin: In regard to the trouble being in the gall bladder: The point made by Dr. Dixon against that view I do not think is well taken. Not many years ago Dr. Larrabee had a case in a child, having a large tumor in this region which was tapped and reported as a case of abscess of the liver. I took issue at the time and requested Dr. Larrabee if the child died to allow me to be present at the autopsy. In the process of time the child did die and Dr. Larrabee and myself made the autopsy; we found over a quart of fluid in the gall bladder. The cystic duct was obstructed, preventing the flow of bile into the duodenum. The absence of jaundice does not necessarily figure against the idea that the trouble in the case presented is in the gall bladder. I am rather inclined to that view, that it is a distended gall bladder rather than an abscess. I have taken some little pains in looking up reports of abscess of the liver, and have never seen a case where there were not more marked extreme symptoms than this man has complained of.

Dr. A. M. Cartledge: I believe the only way to get at exactly what the trouble is in this case is by an exploration. In the first place, I do not see how it can be retro-peritoneal trouble. In the next place, it seems to be clearly cystic and there is considerable distension. In the third place, the history of the case, if it bears out anything, is one of empyema of the gall bladder. Jaundice does not play any part. This is the very kind of a case in which we have no jaundice necessarily. Probably a calculus has become obstructed in the cystic duct, and the gall bladder is distended with bile and mucus. The gall bladder might be distended in this way and the functions of the liver not interfered with.

CORRESPONDENCE.

POINTS OF SIMILARITY.

To the Medical and Surgical Reporter:—I have read the address of Dr Roberts, President of the Philadelphia County Medical Society, upon "Points of Similarity between Us and Homœopathic Physicians" with much distrust in the view advanced.

The burthen of his argument seems to be an apology for the Homœopathic system of medicine, with a wish to receive those who call themselves Homœopaths into fellowship with us.

Nowhere in his argument do we see the moral side brought out to sustain him further in his position. If, as the doctor gives us to understand, these Homœopaths adhere to their peculiar theory in self-limited and minor complaints, but in the graver forms of disease they resort to scientific medicine, the query arises, why do they not discard the name Homœopathy, and come out honestly and show openly to the public where they stand. This species of deception should meet with an open rebuke instead of receiving them into favor. In my observation of this class of Doctors, it has appeared to me that they run their calling for what there is in it financially, without any higher or nobler aim than business.

Where do we see among them any original investigators that have advanced the science of medicine. To-day real Homœopathy is nearly where it started. It was Hahnemannism in the beginning and it is nearly the same now. Does any one man perfect a thing? The past tells us No. The discovery of the germ origin of diseases together with the many additions to our materia medica lately, and the elegant pharmacy of our drug houses have all combined to alarm them for the safety of their system. Hence they have had to resort to the trickery of trying to deceive the public by calling themselves Homœopaths while in truth the majority of them, the more successful ones, treat their cases scientifically without any regard to their peculiar theory.

A young woman who I met sometime ago, spoke to me of how soon a Homœopath relieved her of a violent headache. She said "he gave me a white powder and in 15 minutes my headache was all gone. The white powder proved to be Phenacetine, thus giving her to understand he used Homœopathic medicine for which Homœopathy received the praise. How can we tolerate this species of deception without a rebuke from us.

If Dr. Jos. Ribb and Dr. W. H. Holcombe told such views as Dr. Roberts gives them credit for why are they appearing as Homœopaths before the world. Have they not a purpose in it, in thus deceiving the public. The system having brought itself into favor mainly by the tasteless form of its medicines, it is resorting to many devices to keep its standing as a separate body. This immoral position the Homœopaths hold before the world, we as physician all see, but the general public are deceived and are not cognizant of it. Hence the large field of practice that many of them have. Having gained a notoriety for using, "easy to take" medicines, they are loath to give up their separate organization, for the system certainly has proved a financial success, as we all see. But can they long maintain this position before the world with this duplicity of action.

I have no doubt Dr. Roberts "*Heartiest handshakes*" would be returned with enthusiasm, for they have all to gain by it and nothing to loose. Therefore I would say let us keep aloof from them until they can come to us honestly and honorably and not in this treacherous way.

I would call the attenion of the readers of the Reporter to a prize essay upon "Modern Homœopathy, its Absudities and Inconsistencies," by Dr. Browning, of Brooklyn, New York. It will abundantly repay any one who may wish to known about modern Homœopathy, to procure a copy of this essay.

Your Friend,
W. L. Martin.
Rancocas, N. J.

ANÆSTHETICS.

Editor of the Medical and Surgical Reporter:—In your issue of May 27, 1893, p. 806, Dr. Gunterman in his article on "Chloroform" writes that Dr. Warren, also of Boston, "did the first surgical operation on a patient under the influence of ether. Sir Jas. Simpson, in 1847, was the first to use chloroform." I do not propose to open the question as to the discovery of modern anæsthesia; I have already treated of the subject in my book "Anæsthsia: Ancient and Modern," which had the honor of being reviewed in your journal of April 29, 1890. But I may draw your attention to the fact that, as I mention in my book, Dr. Long, of Jefferson, Georgia, in March 1842, etherized a patient from whom he painlessly removed a tumor. A very full and interesting account of this operation was published in the *Virginia Medical Monthly* for May, 1877, by Dr. J. Marion Sims, who had the account from Wilhite, of Anderson, S. C., who was an apprentice of Dr. Long and was present at the operation.

In 1831 Professor Ives, of New Haven, used a dilute chloroform—chloricether—as an anæsthetic and his case is reported in *Silliam's Journal* for January, 1832.

How ether came to be used by inhalation for the relief of pain, is told in an old and rare copy of *Beddoe's Journal* which, if time permits, I may some day publish.

Yours Truly
7 Cavendish Row, George Foy.
Dublin, June 29, 1893.

It takes a fool a lifetime to find out what others see at a glance.

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SATURDAY, AUGUST 5TH, 1893.

EDITORIAL.

PERITONITIS CAUSED BY THE PROTEUS VULGARIS.

Flexner (*Johns Hopkins Hospital Bulletin*, IV, 1893, p. 34) reports a case of peritonitis caused by the proteus vulgaris. The group of bacteria to which this species belongs was first studied by Hauser in 1885, who found the proteus group existing in decomposed albuminous substances. In pure cultures they were found to be able to induce putrefactive decomposition in meat, either sterilized or non-sterilized. There are a number of reported instances in which it appears that this group of bacteria may produce pathogenic changes in human beings. The case which Dr. Flexner reports is a marked example of this and important in bringing out the pathogenic effect of a bacillus usually considered of only saprophytic properties.

The case was in a young woman aged eighteen, white. She was admitted to the Johns Hopkins Hospital on October 29, 1892. When she entered she complained of pain in the abdomen. No history. She died October 31, two days after entering. The autopsy revealed chronic diffuse nephritis: sero-fibrinous peritonitis: acute pleuritis. "Peritoneal cavity—In its dependent portion,about 300c.c. of faintly turbid serum containing flakes of fibrin. The peritoneum congested, the vessels bright red and turgid, and small punctiform hemorrhages are visible beneath the peritoneal coat. Over the general visceral peritoneum there is a fine granular deposit of fibrin which, on removal, leaves the underlying coat of the intestine free from gloss and vividly injected." From the peritoneal exudate cover-glass preparations showed large bacilli only. No bacteria were found in similar preparations from the organs. Cultures were made from the exudate in the pelvis, fromt he peritoneum covering the diaphragm and from the liver, spleen, kidneys and lungs. The cultures from the liver and spleen remained sterile.

The cultures from the peritoneal exudate and kidney developed cultures of the proteus vulgaris. There was a slight difference in the effect upon milk, but the author thinks them to be identical. Although the culture from the lungs developed coli bacteria, the author thinks that there can be little doubt that the proteus was the cause of the peritonitis.

"The proteus is a widely different organism in nature. It is found in the intestinal canal of human beings, and doubtless under ordinary conditions of health it might find its way into the peritoneal cavity without doing any great damage," but in the case cited the conditions were changed on account of chronic disease.

It is of special interest to know that organisms which do not exhibit under ordinary circumstances any special pathogenic properties in human beings, may, in the altered state of the fluids of the body caused by diseases, produce definite and widespread pathological lesions. Another foe is thus added to those against whom the abdominal surgeon has to contend. Under conditions usually existing, it is the pus-producing and the dirt-loving germs alone with which he has to deal, and with them strict asepsis, the free use of soap and hot water on the hands of the operator, combined with thorough irrigation and drainage of the peritoneal cavity, in those cases requiring it, would seem to be sufficient in most instances. Just how far the proteus vulgaris is accountable for peritonitis following seemingly clean operations remains to be seen, and we wait with interest further investigations of the subject.

OBITUARY.

CAMPBELL.—On July 14th, 1893, at the N.W. Cor. 10th and Wharton Streets, Philadelphia, J. Moore Campbell, M.D., in the 44th year of his age.

RESOLUTIONS of the Jefferson Medical College, Class of 1878, touching the death of Dr. J. Moore Campbell.

WHEREAS, In view of the loss we have sustained by the decease of our dear classmate and associate in the practice of medicine and of the still heavier loss sustained by those who were nearest and dearest to him, therefore, be it

Resolved, That we tenderly condole with the family of our deceased classmate in their hour of trial and affliction and commend them to the keeping of Him who looks with pitying eye upon the widowed and fatherless.

Resolved, That in our natural sorrow for the loss of our esteemed classmate, a faithful and eminent practitioner of medicine—believing the world is better he having lived in it—that we find consolation in the belief that it is well with him for whom we mourn.

Resolved, That this heartfelt testimonial of our sympathy and sorrow be forwarded to the family of our departed classmate by the President of the Jefferson Medical College, Class of 1878, and be printed in the Medical Journals of Philadelphia.

L. WEBSTER FOX, M. D., *President.*

H. A. BROUS, M. D.,
A. H. HULSHIZER, M. D., *Committee.*
J. A. WAMSLEY, M. D.,

Hypodermic Injections of Iron in Anæmia.

Dr. Dantz, of Brussels (*La Semaine Medicale*), in two cases of very intense anæmia, in two working girls, has obtained rapid and considerable improvement from hypodermic injection of the following:

℞ Citrate of Iron..............gms. 2 (grs. xxx).
Distilled water..............gms. 30 (℥i).

Half a syringeful subcutaneously every two days.

Local Syphilides of the Scalp.

Dr. Rietema (*Deutsche Med. Wochenschr*), in local syphilides of the scalp, employes the following salve:

℞ White precipitate..................gms. 4 (ʒj).
Corrosive sublimate..............gms. 0.2 (grs. iij).
Vasoline, Lanoline, aa.................gms. 20 (ʒv).
Oil of roses........................gtts. 5.

Wash the scalp with a solution of the bicarbonate of soda, and then rub in this salve.

ABSTRACTS.

TREATMENT OF LOSS OF SEXUAL POWER BY LIGATION OF VEINS.

The loss of sexual power, says Dr. Alfred King (*Boston Medical and Surgical Journal*), or rather deficient erections of the penis, render so many men miserable mentally and physically, that any new method of treatment, promising a radical cure, merits investigation and trial.

Three immediate causes of deficient erections may be specified: destruction of the erector muscles, loss of nerve power, and a change in the circulation. The first of these is so rare and so easily determined that it needs only a passing notice. The second cause, loss of nerve power, seems to me to have received more prominence than it deserves, as it is the basis on which almost all treatment is founded. While its force in many cases is undisputed, yet the frequent failure of treatment based upon it leads me to direct attention to the importance of the third cause, that is, a change in the circulation. This change takes place in the veins, especially those which do not pass beneath the pubic arch, or are not acted upon by the erector muscles. Repeated engorgement of the penis renders their calibre larger and, consequently, there is a more rapid escape of blood through them. When, therefore, an erection takes place, it cannot be maintained on account of the escape of blood through these channels. Thus we have the history of a gradual shortening of the duration of erections, and, finally, scarcely none if any, as these veins grow larger.

The remedy for such a condition, especially when far advanced, is not in the use of drugs, but may be brought about speedily and safely by the ligation of some of the larger of these veins.

The following case is given to illustrate this cause and its successful treatment:

Mr. M., aged thirty-five, a laborer of powerful physique, came to me about a year ago with the following history: For several years he had been losing the power of maintaining an erection, during the past year its duration having been so short that sexual intercourse had been rendered impossible. There was a loss of sexual desire and great mental depression. Excessive use or abuse was the cause of this condition.

I gave all possible encouragement to the patient; advised total abstinence from sexual intercourse, cold baths (especially to the spine and external genitals); prescribed bromides, cannabis indica, cantharides, damiana, phosphorus and salts containing it; pushed strychnine as far as it could be borne; gave various tonics; used electricity; and, in short, tried everything which offered any hope of success, but all to no effect so far as producing any stronger erections was concerned.

Careful study of the case convinced me that the immediate cause of the trouble was a physical one, due to a leakage, as it were, or to a too rapid escape of blood from the penis when erected. I, therefore, determined to ligate a couple of the larger subcutaneous veins at the base of the penis and watch the effect.

This was very easily done by the use of cocaine. A vein on each side of the penis was exposed, ligated in two places and severed between the ligatures. A dressing was lightly applied and held in position by a strip of adhesive plaster placed longitudinally. The result was immediate. In less than five minutes after leaving my office he had an erection. That night he was awakened by a powerful erection which made the bandage so painfully tight that he was obliged to jump out of bed onto the cold floor to subdue it. Primary union was prevented by the frequent erections, but the success of the operation was certain.

Two months later he reported himself well, mentally and physically; his sexual appetitite had returned, and since the operation, his power of maintaining erections had been as good as ever.

To Hasten Desquamation in Scarlatina.

The following is recommended:

℞ Resorcin ....ʒij.
Lanolini.................................℥iss.
Olei sesami fl...........................℥ss.

Mt et. ft. ung.
Sig.—Rub into skin.

COCAINE IN GENERAL MEDICINE.

The following is a summary of the uses of cocaine in general practice, as elicited by the experience of Philadelphia physicians, collated by Dr. L. H. Adler and reported in the *International Medical Magazine*.

In several cases of chronic alcoholism cocaine did not appear to have any effect, or, if any, but an indifferent result in relieving the nervous depression and the craving for stimulants.

In the tickling cough of an acute angina cocaine acts promptly.

In two cases of asthma with moderate emphysema, a 2 per cent. solution applied to the Schneiderian membrane, promptly relieved the attack and seemed to delay its recurrence.

In chronic Bright's disease, complicated with typhoid fever and suppression of the urine, cocaine in ⅛ grain [8 mg.] doses (in addition to the digitalis and whisky previously employed) produced a copious secretion of urine within a few hours after its use. Good service has been had from cocaine in the anasarca from acute Bright's disease. In chronic Bright's disease (of both the parenchymatous and interstitial varieties) the drug causes a marked increase of the daily excretion of urine.

Cocaine is of no benefit in the cough due to bronchitis.

In cardiac dropsy, cocaine is of use as a diuretic, and especially is this noticeable in cases in which the pulse is feeble and the heart's action weak. In these cases, ¼ grain [16 mg.] doses, increasing to 1 grain [6 ctg.], were administered every 2 or 3 hours.

As a cardiac stimulant cocaine is not only usful but it is prompt and decided in its action. To this statement, however, we find several exceptions taken.

Dr. F. A Packard believes the drug to be useless as a heart stimulant, and Dr. Charles W. Dulles was disappointed in its employment for this purpose in a case of cardiac weakness associated with valvular insufficiency. Dr. James C. Wilson employed the drug a number of times in the latter stage of enteric fever, to combat the tendency to cardiac asthenia. For this purpose he administered it by the mouth and hypodermatically in doses of ⅙ grain, [1 ctg.] repeated every 2-4 hours, or, where the effect was pronounced, at somewhat longer intervals. In a fair proportion of the cases, the drug appeared to have the properties of a cardiac stimulant; in other cases no obvious results followed its use; and in a limited number of cases its effect upon the circulation appeared to be distinctly depressant. Dr. Wilson believes the depression effects observed in certain cases to be due to idiosyncrasy.

In the vomiting of gastric catarrh, alcoholic or otherwise, cocaine ¼ – 1 grain [1.5–6 ctg.] doses, given alone or with bismuth, on an empty stomach, has given instant relief.

In acute nasal catarrh, cocaine, used in the form of a spray (10 per cent solution), has not only relieved but cured the catarrh.

As a cerebral restorative or excitant, the coca-leaf, in the form of a reliable extract, alcoholic or aqueous, is to be preferred to the alkaloid. The fluid extract of the coca-leaf seems to contain other principles and to differ from cocaine in its action almost as opium differs from morphine or cinchona from quinine. Dr. James H. Lloyd believes cocaine to be very potent as a brain stimulant, but he thinks that its use as such is apt to do more harm than good.

As a temperature-elevator in cases of general collapse, cocaine is useful.

The concensus of opinion seems to be opposed to the use of cocaine in the nares unless extreme care be observed and the patient be kept in ignorance as to the remedy employed. In two cases of coryza, in which the drug was used, toxic symptoms ensued. The strength of the solution used in one case was only 2 per cent.

In chronic cystitis, cocaine will afford temporary relief when injected into the bladder, but it must be used with care and caution.

Cocaine has been used in cases of debility of old age. In combination with strychnine and quinine, in doses of ⅛ grain [8 mg.], it has been found to be a safe and good tonic. Dr. J. Cheston Morris does not think it equal in these cases to the elixir of ammonium valerianate.

In the dropsy of both renal and cardiac origin, the internal use of cocaine, in solution or pill form, has proved a useful diuretic when given in doses of ⅛-¼ grain

[8-16 mg.] every 2 hours. Even in cases of complete suppression of urine, which was not relieved by the use of digitalis and whisky alone, cocaine, given in the manner and dose mentioned, soon caused the urine to be secreted.

Cocaine, in the form of a suppository, has been used with some advantage in relieving the tenesmus of dysenteric disorders, especially in the entero-colitis of children.

Good results have sometimes followed the use of cocaine in the several varieties of dyspepsia. The dose employed has been $\frac{1}{4}$–1 grain [1.5–6 ctg.], repeated several times a day. Dr. S. M. Wilson states that in cases of dyspepsia where much general weakness was complained of, the administration of cocaine gave temporary relief only; later on the stomach-trouble seemed to be aggravated.

Sometimes a single dose of cocaine will stop the nausea and retching following ether-anæsthesia. In other cases $\frac{1}{4}$ grain doses [1.5 ctg.] will have to be given hourly.

Wine of coca has been found superior to other remedies in relieving the suffering from hectic fever.

Cocaine has been found of service as a general stimulant in cases of exhaustion occurring during the course of prolonged diseases, such as typhoid fever, particularly when collapse was threatening. In febrile conditions accompanied by irritability of the stomach, the use of the drug, ten or fifteen minutes before giving food, will enable nourishment to be retained when otherwise it would be rejected. To combat the tendency to cardiac asthenia occurring in the later stages of enteric fever, cocaine may be given by the mouth or hypodermatically in doses of $\frac{1}{6}$ grain [1 ctg.] every 2 or 4 hours. In the tremor following typhoid fever, cocaine in some cases seems of permament benefit, and in others its effects are only transitory.

Cocaine is useful in many cases of vomiting dependent upon gastric irritability. It is advisable, in cases of violent nausea and emesis attendant upon gastric irritation from the ingestion of faulty articles of diet, etc., to precede the administration of the cocaine by lavage, in order to get rid of the irritants before applying the sedative. In cases of sympathetic vomiting this preliminary cleansing of the stomach is not necessary. The dose of the drug is $\frac{1}{16}$-$\frac{1}{4}$ grain [4–16 mg.] in one or two teaspoonfuls of water.

Gastritis.—Excellent results have been obtained from the use of cocaine in those cases of gastritis in which the drug could exert a direct local effect.

In cases of gastrodynia, cocaine in $\frac{1}{4}$–1 grain [1.5-6 ctg.] doses, given alone or in combination with bismuth, on an empty stomach, has given instant relief.

In hay-fever, where there is often a markedly neurotic element, Dr. J. H. Lloyd believes that the relief obtained from the use of cocaine is often followed by a reaction which leaves the patient distinctly worse. This gentleman states that he has never known its use to cure this disease. In the asthma of hay-fever, Dr. James M. Anders has found of service a 2 per cent solution of the drug applied to the nares.

As a brain-stimulant, cocaine should not be employed in hysteria, both because its relief is slight and temporary, and especially, because of the danger of forming the cocaine-habit.

In two cases of impotence, wine of coca was given a full trial, but without obtaining any result.

Cocaine has been beneficial in hyperæsthesia of the larynx and pharynx when unaccompanied by any structural lesion in them or in any other organ. The drug should be given in doses of from $\frac{1}{16}$–$\frac{1}{10}$ grain every 4 hours.

Cocaine has been used in melancholia with negative results, except in the acute forms of melancholia agitata, when its employment seemed to give ease to the patient.

Cocaine has been used to combat the opium-habit; the plan of treatment being a descending dose of opium, and an ascending dose of cocaine. The limited experience had with it in these cases is rather unfavorable to its employment.

Cocaine as a spray to the throat and larynx in the sore-throat of advanced phthisis is a temporary relief. Its action, however, is very fugacious, and the patient is apt to want it constantly. Combined with cubebs and morphine, in the form of troche, cocaine in $\frac{1}{20}$ grain [3 mg.] dose, has relieved the cough of phthisis. In the distressing vomiting so often seen accompanying pulmonary phthisis, which is due to the cough, cocaine has been given, but not with satisfactory results.

For the vomiting of pregnancy cocaine occasionally gives relief, but more often it fails. It is probably in the neurasthenic class of these cases, as pointed out by Dr. William L. Taylor, that cocaine is useful. It should be given by the mouth in doses of $\frac{1}{10}$-$\frac{1}{4}$ grain [6-15 mg.] every 2 or 3 hours. It may be advantageously combined with monobromated camphor (1 grain [6 ctg.]) or zinc phosphide ($\frac{1}{10}$ grain [6 mg.]).

Cocaine given by the mouth in doses of $\frac{1}{8}$ grain [8 mg.] has been successful in relieving severe pyrosis.

In cases of œsophageal stricture, cocaine has been used with benefit for two purposes: to allow of the painless passage of the œsophageal bougie, and to enable the patient to eat with comfort by relieving the additional spasmodic constriction which is produced by the contact of food with the mucous membrane of the œsophagus.

Results obtained from the use of cocaine as a general tonic have varied, being favorable and otherwise. When employed for this purpose, cocoa should be given in the form of the wine or in the form of a reliable fluid extract, alcoholic or aqueous.

Indifferent effects have been noted as a result of the use of cocaine in tremor following typhoid fever.

In the pain and vomiting of gastric ulcer cocaine in $\frac{1}{4}$-1 grain [1. 5-6 ctg.] doses has proved very effective. Its administration has also enabled the patient to eat and retain an increased amount of nutriment.

A METHOD OF TREATING COMPOUND FRACTURES.

The method aims at being simple, and in the following account it may be considered as applied to the commonest of compound fractures, viz., those of the leg. On admission, the limb is covered with lint soaked in carbolic lotion and is subsequently cleaned with the greatest care; protruding bone is replaced, loose or damaged bone is removed, and the broken ends are adjusted by means of splints with as little delay as possible.

1. Ordinary well-padded wooden splints are employed, but under no circumstances is the limb secured to the splint by means of strapping. Strapping may be used to form a stirrup whereby extension may be applied in the fractures of the femur or humerus, but no other forms of plaster appears to be other than objectionable when the question of fixing the limb is concerned. If the strapping be adjusted with sufficient firmness, it will often be found that within twenty-four hours the limb has swollen and the strips of plaster are cutting into the soft parts and are impeding the circulation. The strapping then has to be cut or reapplied, and a second adjustment of the limb is rendered necessary. On the other hand, in process of time, the band of strapping is found to have come loose from shrinking of the limb, and a further readjustment of the fractured parts is called for. In the place of plaster, straps of fine webbing and buckles are made use of to secure the limb to the splint. These vary in length, and are applicable to all parts. If found to be too tight or too loose, they can be altered as often as necessary in the day without the least disturbance of the limb. In this way the limb can be secured with a proper degree of firmness. Where the webbing crosses the shin or the dorsum of the foot, a small shield made of gutta-percha, and lined with lint, is interposed. When side splints are employed, these also are held in place by straps and buckles. No bandages are ever applied. They are quite unnecessary. They cannot be readily tightened or loosened, and they cover up to an undesirable extent the damaged parts.

2. In the second place, the limb is kept throughout in the open air. This would happen by necessity, more or less, in the case of the upper limb, but it is insisted upon also in all fractures of the lower limb in which there is a wound. If the principles of aseptic surgery be well founded, a worse atmosphere with which to surround a wound could scarcely be found than that which exists under the bedclothes. This atmosphere is confined, is hot and moist, and when flatus is passed or the bed-pan is used must of necessity become especially offensive. In all compound fractures of the leg or thigh, the limb is kept throughout entirely uncovered

as well by night as by day and in the winter as in the summer. In cold weather. the nurse makes a cotton-wool cap for the foot, but during the six years in which this rule of uncovering the limb has been observed there have been no complaints of chill or evils arising from exposure. It might be mentioned that in the author's wards in all cases of wounds of the lower limb, including amputation wounds, and in all cases of ulcer, the part is kept throughout the whole period of treatment uncovered save by the necessary dressings, and since this plan has been adopted the results have been infinitely improved.

3. The third element in the treatment concerns the treatment of the wound. In cases of compound fracture there is usually a not inconsiderable amount of bleeding and oozing from the wound which will often be continued for many days. It is very desirable that this fluid should not be pent up in the limb, and that it should be allowed the freest possible means of escape. The plan of lealing the wound with collodion may be spoken of in general terms as bad. It can in no way control the oozing, which may long continue from the damaged parts, and merely confines within the recesses of the limb a fluid which is admirably adapted for the development of bacteria.

While a free exit should be given for all discharges of blood and serum, such a barrier must, at the same time, be erected as will prevent the entrance of pus-producing bacteria. A dressing of antiseptic gauze wool may possibly meet these conditions, but in a large proportion of cases such a dressing needs to be very frequently changed, and such a change cannot always be effected without disturbing the position of the broken bones and putting the patient to no little inconvenience.

In the present collection of cases, the wounds have been simply covered with a heap of dry antiseptic powder, which has been applied without stint. This covering of powder may be considered to seal the wound, so far as the possible entrance of bacteria is concerned, while at the same time it in no way impedes the free escape of blood and serum from the damaged parts.

The discharge finds its way into the protecting powder, and forms with it a harmless scab or crust. As the powder becomes saturated, more and more of it is applied, but the crust produced is not disturbed. In certain cases the oozing continues for many days, and in one or two instances the crust produced has exceeded the size of the adult fist. The powder employed has been iodoform or creolin. The latter has been found to be the more convenient. For the first few days the powder may need to be dusted on every few hours, and as the limb is kept always uncovered the saturation of the crust can be at once noticed. When no more blood is found to be escaping the powder is discontinued, and some seven days after this period the artificial scab is removed and the wound beneath may be expected to be healed or to be healing.

When the laceration occurs upon the upper surface of the limb there is no difficulty in covering it with powder. When it is placed upon the sides of the extremity a platform of cotton wool must be so fixed in place that the powder, when dusted upon it, will bury the wound. The cotton wool may be kept in position by fixing it in position against the side of splints, or by attaching it to the skin by gum.

The following advantages may be claimed for this method: It is simple, and requires but the simplest appliances. The fracture, when once adjusted, need not be again disturbed. The damaged part is kept exposed to view, and the position of the ends of the bone can be ascertained at any time.—Frederick Treves, F. R. C. S., in *Annals of Surgery.*

Acute Rheumatism.

Le Progres Medicale gives the following:

1. ℞ Tinct. aconite........................gms. 12 (ʒiij)
Destill. extr. hamamelis............gms. 90 (℥iij).
Alcohol..................................gms. 60 (℥ij).

Liniment. Apply locally and cover the joint with a flannel.

2. ℞ Phosphate of Iron................gms. 0.3 (grs. v).
Bromide of lithia..................gms. 25 (ʒvj).
Distilled water......................gms. 120 (℥iv).

A teaspoonful every two or three hours, in water.

3. ℞ Salicylic acid,
Bicarbonate of soda, } aa......gms. 8 (ʒij).

Sufficient for twelve powders. One every two or three hours.

For Shock Following Abdominal Operations.

Dr. E. P. Davis gives the following in cases of slight shock following abdominal operations:

℞ Elixir ammonii valerianati................ʒj.
Spirit frumenti................................℥ij.
Aqua bullient..................................℥ij.

M. Sig.—As an enema every two hours.

WHEN AND WHY THE BABY SHOULD HAVE A DRINK OF WATER.

CHARLES G. KERLEY, M. D.

Does the thought of giving the baby, whether sick or well, a drink of water ever occur to the mother of a nursing or bottle-fed infant? This question can be answered, with but few exceptions, in the negative. Does it occur to the physician to suggest the same for his little patient? Comparatively seldom. The idea that an infant should not have plain water to drink is so thoroughly grounded in the minds of many people that they rebel when it is suggested to them. In an experience with several hundred mothers of young babies, both in institutions and in private life, I have met with but very few to whom the idea had ever suggested itself. The opinion seems to prevail among the better class that a babe less than one year of age should get nothing but milk or some one or more of the liquid foods. A great many of my dispensary patients are given everything drinkable but water.

Every physician who has much to do with children has often elicited the following history of his patient after a careful inquiry: The bottle-fed infant was taken sick with some slight ailment accompanied by fever; perhaps there was a slight bronchitis, or a tonsilitis, or a dyspeptic catarrh; at all events the child was feverish and thirsty; the usual amount of milk, at other times sufficient, now did not satisfy; the baby cried for the bottle after feeding, and was only appeased by an extra allowance of milk. This indulgence was continued for a day or two, and was followed by diarrhœa and vomiting, directly produced by the repeated overloading of the stomach, the severity of the attack varying according to the condition of the child, the season of the year, the nature of the food given and the surroundings. The crying for the bottle was interpreted by the mother as a call for more food, and as the crying was stopped when it was given, the process was repeated. The babe did not require more food; it was thirsty and would have been just as well satisfied with a tablespoonful or two of water, and the unpleasant, if not dangerous, results of overfeeding would have been obviated.

So thoroughly have I become convinced of the great benefit derived from giving water to sick babies that I now order it in nearly every case with fever, and it is astonishing to see how the restlessness and many of the symptoms we are apt to attribute to pain and fever disappear when it is given freely. By freely I mean from ½ to 2 ounces immediately after or between the feedings. If given immediately after the feeding a smaller quantity will, of course, be required. Time and again I have seen infants with measles, scarlet fever or pneumonia, after a period of great restlessness, fall into a quiet sleep when a couple of ounces of cool water had been given.

In summer diarrhœa, the so-called cholera infantum, with the large watery evacuation, the loss of fluids from the body is enormous. In such cases, the little patients take the water ravenously. I have given babies eight to twelve months old, with severe diarrhœa, from 4 to 6 ounces of water every two hours, alternating with the sick diet, which was also a fluid. Sometimes after taking such a large amount the child will vomit, especially if it is handled a great deal. The patient should, therefore, be kept absolutely quiet; but if vomiting occurs it can do no harm; in fact, it may be beneficial, as it serves to wash out the stomach, possibly removing curds and offending material, and so taking the place of a stomach washing. After a few minutes of rest a couple of tablespoonfuls may be given, and will almost always be retained.

In some forms of illness it is necessary to diminish the amount of food given. In these the loss in bulk should always be substituted with water. During the hot months of July and August the breast-fed infant is apt to be nursed too frequently or too long at a time, consequently overnursed—more milk is taken than is required. If a few teaspoonfuls of water are given after it has nursed the proper time, the babe will be just as well satisfied. Or if too frequent nursing is the trouble, a small amount given between the regular nursing hours will enable the child to go the usual time without inconvenience. If this is done, the babe will not be overfed; and, further, the water, if given immediately after the nursing, will assist in the digestion of the milk by causing the curd to form in smaller masses, and it is, consequently, much more easily acted upon by the stomach juices, thereby helping to keep the stomach in a healthy condition, the chances for serious trouble being thus largely lessened. If a drink or two is given at night during the excessively hot weather, it will help to break up the pernicious habit of frequent night nursing, produce sleep and comfort for the child and much-needed rest for the mother.

The water to be given should be boiled, put in a cool place and kept carefully covered. It should never be given very cold. It will usually be well taken from an ordinary nursing bottle at a temperature of 50° to 70° F. Some babies will not take the water at all, at first, if it is cool; in such cases, of course, it can be warmed. It will readily be seen that the advisability of giving the baby water to drink when indicated as above is unquestionable. Harm it cannot do.—*Mother's Nursery Guide.*

THE INFLUENCE OF DISEASE OF THE EAR UPON THE DEVELOPMENT AND COURSE OF INSANITY.

The following is an extract by Ireland (*Journal Mental Science*), from a resume of Dr. Bjeljaknow (*Boston Med. and Surg. Journal*), who has studied the subject in a hospital of St. Petersburg. He has confined his observations to cases where there was distinct inflammation of the middle ear.

Out of the post-mortem examinations which he made during four years, 17.12 per cent. suffered from internal otitis. Of these, one of the patients had melancholia, one paronoia hallucinatoria acuta, eight paranoia hallcinatoria chronica, two secondary dementia, three epileptic insanity, four general paralysis, one acute delirium, one senile dementia and three hebephrenia.

The author, at the end of his paper, gives the following conclusions:

1. An inflammatory process of the internal ear is frequently the cause of mental derangement, especially of insanity accompanied by hallucinations.

2. If the local inflammatory process takes an unfavorable course, the insanity often passes into secondary dementia, which, otherwise, this form of insanity is not so liable to do.

One-sided hallucinations of hearing are very frequently the result of a heightened excitability of the cortical centers, the result of the transmission of the irritation from the auditory nerves.

3. Hallucinations of hearing on both sides, which support the hypothesis of the independent function of each hemisphere, may be caused through disease of the auditory apparatus.

4. Irritation of the organ of hearing frequently does not stop at exciting hallucinations of hearing, but as a result of the influence of this sense upon the other, it also excites other hallucinations, especially those of taste, smell and general sensibility.

The character of the delusions of the sense is tinged by the personality of the patient.

5. In many of these patients who suffered from ear disease, there was found a hyperesthesia of hearing which, as a sequel to noises or musical sounds in the ear, becomes changed into a diseased sensation.

At the same time, the sensibility to hearing outward sounds is not increased, but, for the most part, diminished.

6. The overflow of saliva, which often accompanies suppuration of the middle ear, is caused by irritation of the chord and the nerves of the tympanic plexus.

The hypochondriac depression and pain about the pericardium, which from time to time trouble these patients, may be explained through irritation of the nervivagi of the auricular branch and the propagation of this irritation to the auditory brain centers.

7. The connection of disease of the ear with insanity accompanied by hallucinations is only observed in cases where mental activity and apprehension are not yet much diminished.

8. Epilepsy seems sometimes to depend upon disease of the labyrinth.

The irritation, coming from inflammation of the middle ear, may assume the form of a false general paralysis.

9. Hallucinations of hearing, though rare in general paralysis, may, when they appear, be the result of otitis on one side. In this case the hallucination is generally confined to the same side of the brain.

SELECTED FORMULÆ.

Cutaneous Diseases.

Nothing is better, says A. T. Thompson, to allay itching in cutaneous diseases than the following:

℞	Plumbi acetatis	grs. xvj.
	Acidi hydrocyanici diluti	ʒjss.
	Spiritus rectificati	℥iv.
	Aquæ destillatæ	℥vijss.

M. Sig.—Fiat lotio.

Prevention of Boils.

Dr. Rosenbach (*Munch. Med. Wochenschr.* No. 8, 1893), in order to prevent the development of crops of boils, in the back of the neck and nose, especially advises persistently rubbing the region attacked with some fatty substance, as cold cream, *lanoline*, unsalted butter or lard. Lanoline, above all is to be preferred. The development of boils is due to dryness of the skin, and by inunction of a fatty substance the dryness is removed and the penetration of micro-organisms prevented.

For Chronic Bronchitis and Emphysema.

The following is recommended:

℞	Ammonii carbonatis	grs. iv.
	Tincturæ scillæ	mxx.
	Spiritus ætheris	mx.
	Tincturæ nucis vomicæ	mx.
	Infusum serpentariæ ad	℥j.

Misce et fiat mistura.
Two tablespoonfuls every six hours.

PROF. GRAHAM ordered the following as a dusting powder for syphilitic eruptions on a child.

℞	Acid boraric	ʒ ij
	Hydrarg chlorid mitis	ʒ ij
	Lycopodii	ʒ vj

M. Sig. ;Dust on the parts affected night and morning

Atrophic Rhinitis.

℞	Thymol	grs. jss.
	Alcohol, Glycerini,	āā ʒjss
	Aq. dest	℥j

Use as a spray.

Zinc Glue.

Trentler recommends a preparation, first suggested by Una, for stiff surgical dressings suitable for fractures and dislocations:

℞	Oxide of zinc	10 parts.
	Gelatine	30 parts.
	Glycerine	30 parts.
	Water	30 parts.

Apply thickly, rubbing into the muslin or gauze forming the bandage.

—*Ex.*

Enlarged Tonsils.

Dr. Moure cauterizes with this:

℞	Trichloracetic acid	gr. i ss.
	Iodine	gtts. iv.
	Iodide potash	grs. viij.
	Glycerin	f℥ii¼.
	Distilled water	f℥iiss.

Nocturnal Sweats of Consumption.

Dr. Ewart (*La Sem. Med.*) speaks highly of the following pill, in the night-sweats of consumptives:

℞	Sulphate of quinine, Sulphate of zinc, Ext. of hyoscyamus,	aa. gms. 1.5 (grs. xxij.)
	Ext. of nux vomica	gms. 0.5 (grs. vijss.)

Make sufficient for twenty pills. Two pills on retiring.

Herpes Zoster.

Broca recommends the following in herpės zoster:

℞	Acid. boric	ʒss.
	Zinci oxid., Pulv. amyli,	aa ʒj
	Vaselin., pur	℥iij.
	Lanolin	℥ivss.

M. Ft. unguent.

Aqua Picis in Cholera.

Polubinski has observed in choleratic patients real benefit from the use of tar-water, which he gave internally, in small quantities, in form of clysters. It many times arrested violent diarrhœa and vomiting, and improved the *bien-etre* of the patients.—*Trans. Omsk Med. Soc.*, Vol. ix, No. 9.

Bites of Insects.

Dr. E. Lang (*La Sem. Med.*) praises the following preparation in the bites of insects:

℞	Liquid ammonia	gms. 3 (gtts. xlv.)
	Collodion	gms. 1 (gtts. xv.)
	Salicylic acid	gms. 0.1 (grs. jss.)

Apply a drop upon each bite.

—*Pritchard.*

Constitutional Syphilis.

A mixture often ordered by Dr. Keyes is as follows:

℞	Potass. iodid	ʒij
	Ammonii carbonatis	℥ss.
	Tr. cinchonæ comp	ʒiv.
	Syr. aurantii cort	ʒjss.
	Glycerine	℥j.

M. Sig.—A teaspoonful, well diluted, after each meal.

CURRENT LITERATURE REVIEWED.

THE CHICAGO MEDICAL RECORDER

for July. Dr. Archibald Church contributes an article on

The Removal of Ovaries and Tubes in the Insane and Neurotic,

in whch he comes to the following conclusions:

1. The removal of the adnexa is not justifiable in cases of pure functional neurosis. 2. Even when appreciable disease of the tubes and ovaries is present, an operation should not be performed until palliative treatment has first been tried. The results in hystero-epilepsy and hystero-mania are so uncertain that celiotomy is not to be advised.

Dr. Edward Wyllys Andrews discusses

An Improved Operation for Varicocele.

The operation is described as follows:

The redundant scrotal skin is grasped as in preparing to apply the clamp. Having crowded the testes upward until there appears but little more room for them, and it is apparent that the skin over them is reasonably tense, the part below this is marked for removal with all such veins pertaining to the varicocele as can be taken up with it. Now, intead of the clamp, a line of sutures is made to separate the portion to be removed from that above, the line being carried from the perineum forward in a curve to some point below the bulb of the penis.

If quilled sutures are inserted they should be placed one-half an inch apart and drawn not too tightly.

The plan the author prefers is to thread two silkworm guts upon straight needles and tie the other ends to each other, thus getting a long piece with a needle at each end. Beginning at the perineal end, the double stitch is now carried forward in loops of one-half or five-eighths of an inch in length, the needles inserted being from opposite sides and crossing each other each time until the front is reached, where the free ends are tied to each other.

One reason for preference for this form of deep suture is because it shortens the line as well as compresses laterally by a sort of puckering string action.

Having secured contact of the two sides of the scrotum by this permanent substitue for the clamp, it only remains to divide the skin, and contained varices, about half an inch below this line and secure all bleeding which the compression of the deep sutures may permit, after which a continuous horsehair or other superficial suture will complete the operation.

The author states that his success with this operation has been perfect. Union of the superficial wound usually takes place in five or six days, but the author prefers to leave everything untouched for about fourteen days, removing everything at that time, including the retention sutures, and sealing with collodion any small unhealed spot.

The operation should be done with rather minute care, especially in the final step of approximating the scrotal skin which is thin and needs careful suturing with a fine needle and very numerous small stitches to insure nice closure. It is well to use a few horsehair drains of a dozen or two fibres each, to remove the excessive serum by capillarity and prevent local distension.

Dr. A. E. Hoadley reports "Six Cases of Metatarsalgia." In one case the pain was relieved only by the resection of a small neuroma on the digital branches of the plantar nerve. The other cases recovered by the use of a properly fitting shoe provided with a stiff sole to prevent bending of the foot.

Mr. Ernest Hart, of London, contributes a most able article on "The Health Conditions of Chicago." With his characteristic clearness, he points out the great danger from the water supply and the constant danger of its polution by sewerage from the Chicago River. He also shows that the typhoid mortality of Chicago is above that of any great city of the world. He urges that the cribs for the intake of the water supply be all moved out four miles into the lake and that a system of subsidence and filtration be established.

The remaining papers in this month's issue are: "Electro-diagnosis" by Dr. Edwin R. Bennett; and "A Case of Carcinoma of the Tongue" by Dr. Bayard Holmes. The growth extended, after two partial extirpations, to the alveolus. Partial excision of the lower jaw and partial excision of the tongue was performed with the result that no recurrence has taken place in three and one-half years.

THE CANADIAN PRACTITIONER

for July. Dr. R. W. Powell contributes an article on

The Management of Abortion.

When an abortion threatens, complete rest in bed on the back must be enjoined, and avoidance of all excitement; plain, easily-digested food allowed. Opium is to be given in full doses, and repeated sufficiently often to keep up its effect. Solid opium, morphia by the mouth or hypodermically, laudanum per rectum or in mixture, and also suppositories, may be used in such a case, at the discretion of the practitioner. Viburnum also has been highly lauded; pot. bromide is often very useful. These measures frequently avail to stave off the abortion, and if they do we should insist on the patient remaining in bed a week at least after the symptoms have entirely disappeared, and to resume her ordinary mode of life and avocations gradually, and with care to avoid all those causes which tend to a recurrence of the symptoms.

When the patient is actually aborting, he advocates the "let alone" policy, especially in primipara in whom the hemorrhage

℞

Chloralamid...................... ...	℥ss
In spts. vini gallici ℥i solve, tum adde	
Tinct. hyoscyami................	ʒiv
Tinct. valerianae................	℥i
Elixir simp.......................	q. s. ad ʒvi

M. Sig.: A teaspoonful four times a day.

In my own observation, attacks of chorea which have resisted morphia, have promptly yielded to ten grain doses of chloralamid.

In the insomia or disturbed sleep with unpleasant dreams which result from alcoholic, tobacco, and sexual excesses, chloralamid has a special field of usefulness. It should be given in full doses at bed-time, while mineral tonic and reconstructives should be administered throughout the day, and such a course, if accompanied by proper abstinence, will relieve the overtaxed economy, and prevent the otherwise inevitable spinal and cerebo-spinal sequelæ.

In mania and melancholia, chloralamid is superior to chloral and the bromides, not only for securing sleep but in contributing materially towards recovery—it being now a general opinion that cases of *acute* mania treated by these latter drugs are longer in recovering, and even more likely to result in dementia than those not so treated. On the other hand, chloralamid is well borne even in attacks of acute mania; and with imbeciles and demented persons in whom no active cerebral disease is progressing, it also affords excellent results.

From these observations may we not justly conclude that chloralamid is a practical, safe and efficient hypnotic—exercising, when properly administered, a salutary effect upon central nervous tissue; relieving abnormal intercranial congestion, and strengthening peripheral nerve fibres, without depressing the action of any vital organ or interfering with the normal bodily functions.—*Notes on New Review.*

MEDICINE.

Insanity Following Surgical Operations.

In order to present this subject says Dr. Lears in the *Boston Med. and Surg. Jour.* in form for discussion I have formulated the following propositions:

1. That the insanity following operations is identical in form with that which follows acute disease.

2. That it may follow the most trivial operations as well as the most serious; that after gyencological operations it possibly is, and after cataract operations it probably is more common that after other surgical procedures.

3. That the aggregate number of cases is greater in women than in men, but that this disproportion would be lessened and might even disappear if only such operations as are common to the two sexes be compared.

4. That the causes are those which induce perverted or exhausted cerebral nutrition, among which are shock, fear or anxiety before operation, the sudden relief from strain after it, sepsis, malnutrition and advanced age.

5. That it is impossible to say that iodoform or other antiseptics may not have been the cause of some cases, in the same manner that drugs taken by the mouth may lead to mental disturbance, but that these cases are probably very few in number.

6. That it usually appears within the first two weeks and may even come on immediately after the operation; that if it develops after the lapse of two or three months it is probably the result of other causes or is at best but indirectly connected with the operation.

7. That the prognosis is not particularly good, but 60 or 70 per cent. of the cases at most recovering; that recovery is more common in men than women, and when it occurs, takes place usually within a few months, but that the outlook is not absolutely unfavorable even if it continues for a longer period.

8. That hereditary influences are of comparatively slight importance while a condition of previous mental or nervous instability is a decided factor in inducing its appearance.

9. That when a patient shows a marked tendency to insanity, or when nental symptoms are already present, an operation is attended with much danger in this respect and great responsibility rests upon the surgeon who advises it.

10. That the progress of the wound is not influenced by the onset of insanity *per se.*

Tests of Death.

Dr. Edwin Howard describes a case in the *Lancet*, June 10th, in which the question whether death had occurred was entered into at length, because of the lifelike appearance of the body, and a history of a previous deathlike trance. With Sir Benjamin Ward Richardson the following ten tests were undertaken, two of which argued for, the other eight against, the presence of life. The paper is intended to show that the "diaphanous test" (No. 10) is unreliable, as in this case the fact of death was subsequently proved by waiting for decomposition. The list of tests is instructive, and may at any time be useful to a medical man.

(1) Heart sounds and motion entirely absent, together with all pulse movement. (2) Respiratory sounds and movements entirely absent. (3) Temperature of the body taken from the mouth the same as that of the surrounding air in the room, 62° F. (4) A bright needle plunged into the body of the biceps muscle (Cloquet's needle test) and left there shows on withdrawal no sign of oxidation. (5) Intermittent shocks of electricity at different tensions passed by needles into various muscles and groups of muscle give no indication whatever of irritability. (6) The fillet test applied to the veins of the arm (Richardson's test) causes no filling of veins on the distal side of the fillet. (7) The opening of a vein to ascertain whether the blood has undergone coagulation shows that the blood was still fluid. (8) The subcutaneous injection of ammonia (Monte Verdi's test) causes the dirty brown stain indicative of dissolution.

(9) On making careful movements of the joints of the extremities, of the lower jaw and of the occipito-frontalis rigor mortis is found in several parts.

Thus of these nine tests eight distinctly declared that death was absolute; the exception, the fluidity of the blood, being a phenomenon quite compatible with blood preter-naturally fluid and at a low temperature, even though death had occurred.

There now remained the diaphanous test (10), which was carried out by the aid of a powerful reflector lamp, the scarlet line of light between the fingers was as distinct as it was in living hands subjected to the same experiment.

Epileptic Neuralgia of the Face.

Dr. Fere reports a case in which neuralgia of the face is associated with epilepsy. This has been observed before; Trousseau declared it to be simply coincident. The absence of hereditary taint, of intellectual disturbances, and of simultaneous occurence of both affections, seemed to speak for the correctness of Trousseau's idea. In the following case, however, there is no absence of the foregoing symptoms, and what constitutes a further proof is that a cure of both diseases was brought about by the same remedy. The patient was a man 42 years of age, in whose family, on the maternal side, there was a decided hereditary taint. He had for six years been suffering from neuralgia of the face. At first the attacks occurred not oftener than every fourteeen days, and were confined to the left side. They began on the chin and at the same time the skin became red, followed by the development of confluent maculæ. In the course of years these attacks became more and more painful and frequently (as many as 20 in one day). At the same time spasms at the side of the eyelids accompanying the pains showed themsleves. Finally, after a number of medicines had been tried without benefit, epileptic attacks developed. By means of large doses of bromides of potash (7—10 grammes *per diem*) the epilepsy and neuralgia were cured within a few months, which would seem to show that the two affections had a common cause. —*Central Med.*

SURGERY.

Digital Compression in the Vomiting of Anæsthesia.

Dr. Bernard Joos describes a method for the control of the hiccough and vomiting during anæsthesia, which he has found successful for several years. It consists in digital compression of the phrenic and vagus nerve against the sternal end of the clavicle. His method is as follows: As soon as singultus or vomiting begins, the etherizer presses the last phalanx of the left thumb firmly over the sternal end of the clavicle, the body of the thumb being parallel with the clavicle and the hand resting on the chest. The pressure is made with the radial side of the thumb. The vomiting stops at once, as a rule. If needed, or more convenient, the pressure may be made on the right side. Pressure is continued for a few moments to prevent a return of the vomiting. He recommends the trial of this method in cases of sea-sickness.—*Bost. Med. and Surg. Jour.*

NEWS AND MISCELLANY.

Pan-American Medical Congress.

Committee of Arrangements, Washington, D. C.—Samuel S. Adams, M. D., Chairman; J. R. Wellington, M. D., Secretary; G. L. Magruder, M. D., Treasurer.

Executive Committee.—Dr. Samuel S. Adams, Chairmam; Surgeon-Generals Geo. M. Sternberg, U. S. A.; J. Rufus Tryon, U. S. N.; Walter Wyman, U. S. M. H. S.; Drs. S. C. Busey, G. Wythe Cook, Carl H. A. Kleinschmidt, H. L. E. Johnson, Llewellyn Eliot, H. H. Barker, C. W. Richardson, W. Sinclair Bowen, Geo. S. Ober, G. L. Magruder, J. R. Wellington, and John R. Walton, D. D. S.

SUB-COMMITTEES.

Reception.—Dr. S. C. Busey, Chairman; Surgeon-Generals Geo. M. Sternberg, U.S.A.; J. Rufus Tryon, U. S. N.; Walter Wyman, U. S. M. H. S.; Drs. J. Ford Thompson, Charles Hagner, Louis Mackall, J. Taber Johnson, T. Morris Murray, G. Byrd Harrison, and Jos. H. Bryan.

Entertainments.—Dr. G. Wythe Cook, Chairman; Drs. G. N. Acker and Thos. E. McArdle.

Registration.—Dr. Carl H. A. Kleinschmidt, Chairman; Drs. John S. McLain and Johnson Eliot.

Railroads.—Dr. H. L. E. Johnson, Chairman; Drs. E. L. Tompkins and J. Foster Scott.

Printing.—Dr. Llewellyn Eliot, Chairman; Drs. Thomas N. Vincent and F. B. Bishop.

Halls and Exhibits.—Dr. H. H. Barker, Chairman; Dr. J. T. Winter and C. M. Buchanan.

Ways and Means.—Dr. C. W. Richardson, Chairman; Drs. John Van Rensselaer, Wm. Dillenback, Henry B. Deale, and Wm. Compton.

Information.—Dr. W. Sinclair Bowen, Chairman; Drs. E. Oliver Belt and F. S. Nash.

Hotels.—Dr. Geo. S. Ober, Chairman; Drs. Wm. E. Handy and D. O. Leech.

Dr. Ernest Hart, Editor of the *British Medical Journal*, and Prof. Dr. Czerny, of Heidelberg, will be among the distinguished guests of the Pan-American Medical Congress. The latter is booked for the Pan-American Excursion to Rome by the "*Werra.*"

OFFICIAL DELEGATES TO THE PAN-AMERICAN MEDICAL CONGRESS.

Practically all of the Govermnents have appointed official delegates to the Congres in response to the invitation by the President of the United States. The U. S. Government will be represented by six delegates. The larger cities of all the Latin-American Countries have appointed delegates to participate in the proceedings of the Sections of Hygiene, Climatology, and Demography, and on Marine Hygiene and Quarantine, and similar appointments will be made by the cities of the United States. Seventy-six similar delegates have so far been appointed by the Governors of States in the United States. A large number of delegates have been chosen by the medical colleges of the United States and other American Countries to attend the Section on Medical Pedagogics, under the Presidency of Professor J. Collins Warren, of Boston.

At the last meeting of the Ohio State Medical Society, the following officers were elected: President, N. P. Dandridge, M. D., Cincinnati; 1st Vice Pres., F. C. Larimore, M. D., Mt.Vernon; 2nd Vice Pres., Wm. Caldwell, M. D., Fremont; 3rd Vice Pres., W. T. Corlett, M. D., Cleveland; 4th Vice Pres., L. S. McCurdy, M. D., Dennison; Secretary, Thos. Hubbard, M. D., Toledo; Asst. Secy., Chas. Græfe, M. D., Sandusky; Treasurer, J. A. Duncan, M. D., Toledo.

ARMY AND NAVY.

U. S. ARMY FROM JULY 16, 1893, TO JULY 29, 1893.

Captain Leonard Wood, Assistant Surgeon is relieved from duty at Presido of San Franciso, Cal. and ordered to Fort McPherson, Georgia, for duty.

Captain Louis W. Crampton, Assistant Surgeon, is relieved from duty at Fort Spokane, Washington, and from temporary duty at Hdgrs, Dept of the Colorado, and ordered to Baltimore, Md. as Attending Surgeon and Examiner of Recruits, relieving Capt. Charles B. Ewing, Assistant Surgeon.

1st Lieut. James D. Glennan, Assistant Surgeon, ordered to report to the president of the examining board for examination for promotion.

Major Peter J. A. Cleary, Surgeon, granted leave of absence for four months on Surgeon's certificate of disability.

1st Lieut. A. E. Bradley, Assistant Surgeon, ordered to report to Lieut. Col. Sallas Bache, deputy surgeon general, president of examining board at Omaha, Neb., for examination for promotion to grade of Captain.

1st Lieut. J. T. Clarke, assistant surgeon, will on the abandonment of Camp Poplar River, Mont. proceed to Fort Sully, S. S. for temporary duty, and on return 1st Lieut. Bradley proceed to and take station at Fort Omaha, Nebraska.

Leave of absence for one month, to take effect between the 15th and 30th instant, is granted Major Calvin DeWitt, surgeon U. S. Army.

Captain Richard W. Johns, Assistant Surgeon, will report on or before August 6, 1893. to the commanding office Fort McHenry Maryland, for temporary duty at that post during the absence of Captain Charles B. Ewing, Assistant Surgeon.

Leave of absence for month, to take effect when his services can be spared at Fort Wingate, N. Mexico, is granted Major Louis M. Maus, Surgeon U. S. Army.

Leave of absence for two months, to take effect, on or about September 15, 1893, with permission to apply for an extension of one month, is granted 1st Lieutenant Benjamin L. Ten Eyck, Assistant Surgeon U. S. Army.

Captain William B. Davis, Assistant Surgeon, is releived from duty at Fort Sam Houston, Texas, and ordered to Fort Brown, Texas, for duty, relieving Captain George A. Torney, Assistant Surgeon.

Captain Torney upon being relieved, by Captain Davis, will proceed to and take station at Philadelphia, Pennsylvania, as Attending Surgeon and Examiner of Recruits at that place.

Half Rate Excursions to the World's Fair via Washington and the B. & O. R. R.

The Baltimore and Ohio R. R. will run a series of special excursions from New York to the World's Fair at rate of $17.00 for the round trip. The trains will consist of first-class day coaches equipped with labatories and toilet conveniences. The trains will start from Jersey Central Station, foot of Liberty Street, New York, at 8.30 A. M., Aug. 5th, 9th and 15th, and reach Chicago at 4.30 P. M. the following day. Tickets will be valid for outward journey only on the special trains, but will be good returning from Chicago in day coaches on any regular train within 10 days, including day of sale. Stops will be made for meals at the dining stations on the line. A Tourist Agent and a train porter will accompany each train to look after the comfort of passengers. Tickets will also be sold for these trains at the Jersey Central offices in Newark, Elizabeth, Plainfield, Bound Brook and Somerville. New York offices 172, 415 and 1140 Broadway, and Station foot of Liberty Street.

Picturesque Route to the Fair.

No other line offers the variety of scenic interest between New York and Chicago that is enjoyed by World's Fair tourists via the Baltimore and Ohio Railroad. Passing through Philadelphia, Baltimore, Washington, the capital of the nation, and by way of Harper's Ferry and the historic Potomac Valley to the Allegheny mountains, which are crossed at an elevation of 3,000 feet above the sea, the traveler sees the arena of the activity of the nation as well as the principal historical features and scenic wonders of the East. Low rates.

THE MEDICAL AND SURGICAL REPORTER.

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ORIGINAL ARTICLES.

FRACTURES OF PATELLA, WITH REPORT OF CASE TREATED BY SUTERING.

WILLIAM MACKIE, M.A., M.D.†

In considering the subject of fractures of the patella, I propose to first direct attention to some points in the anatomy of the bone, then the etiology, pathology, symptoms, prognosis, causes of non-union, treatment, and conclude by giving the history of a case which came under my personal observation.

Anatomy.—The general outline of the patella is triangular. To the apex and underlying rough surface is attached the ligamentum patella; and to the margins the tendinous expansion of the vasti. The upper border is oblique in direction, the outer edge being about one third of an inch higher than the inner. It is marked by a transverse groove into which anteriorly, the tendon of the quadriceps extensor is inserted and continued over the front of the bone to become continuous with the ligamentum patellæ.

Until pointed out by MacEwan,[1] this aponeurosis in front of the bone was supposed to be either wanting, or of such limited extent as to be unworthy of consideration. To demonstrate its existence and character, he divided longitudinally the quadriceps extensor tendon, patella and ligamentum patellæ, then sawed the patella partly through in a transverse direction from the articular surface so as to admit of easy fracture of the bone. After breaking the bone, the lower fragment was torn from its ligamentous and aponeurotic attachments, leaving them exposed.

In young children he found the ligamentous structures in front of the bone were represented by a thin film, in many places scarcely distinguishable from the cartilage. In advanced life they were attenuated especially over the center of the patella.

In six instances ranging from fourteen to forty-five years of age, (the period during which fractures of the patella occur), the aponeurotic structures ran in a distinct band over the front of the patella continously from the tendon of the quadriceps to the ligamentum patellæ. The antero-posterior thickness of this layer ranged from one thirty-second to one sixteenth of an inch. The bulk of these fibres were longitudinal in direction, many continuous from tendon to ligament; a few were oblique.

The patella is the analogue of the olecranon, and serves to increase the power of the extensor muscles by causing them to act on the knee at a greater angle. With the limb extended and the quadriceps inactive, it is freely movable from side to side and upward and downward, and does not become fixed until the knee is flexed to an angle of 130°. This great mobility is difficult to overcome in the treatment of fractures.

Etiology.—Fractures of the patella may be the result of either direct or indirect violence. The former is due to the application of the fracturing force to the bone through the medium of the over-lying soft tissues, with or without wound, and the latter to the violent contraction of the quadriceps extensor muscle in extraordinary efforts made to prevent the body from falling, in lifting heavy weights, in assuming the erect position from kneeling, or any other condition in which the muscle is brought vigorously and suddenly into action. Direct traction is also said to produce it, and in proof of this Stimson[2] instances a case recorded by Garreau, where the second fracture occurred in the upper fragment after ligamentous union of the primary fracture with 4cm. separation. Clinically those the result of indirect violence are the most common. Of 127 cases observed by Hamilton, 107 were assigned to this cause. The mechanism of those resulting from direct violence is simple, that of the indirect is more complex. It is thus described by MacEwan: "The sudden development of the full retractile force of the powerful quadriceps causes the patella to be jerked upward, relatively to the femur, beyond the position where it usually lies supported laterally by the femoral patellar surface. The patella being held below by the powerful ligamentum patellæ, rests on the apex of its posterior vertical edge, which thus becomes the point upon which is developed the greatest energy of the two opposing forces; that of the contractile power of the quadriceps extensor, and the weight of the body on the other." That is, the patella becomes converted into a lever, the fulcrum being the apex of the vertical ridge resting on the condyle of the femur; the active force, the contraction of the quadriceps extensor attached to upper border of the bone; and the passive, the resistance of the ligamentum patellæ. The bone gives way; the contraction continuing, the fragments separate and the aponeurotic coverings being more elastic, rupture at a lower level than the line of fracture. This laceration may extend into the capsule of the joint and the præ-patellar bursa. Many cases attributed to direct violence are doubtless the result of indirect, because if the patient fall and strike upon the knee, he naturally assigns the fall as the cause.

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† Surgeon Milwaukee Hospital, Milwaukee, Wis.

Forcible flexion of an anchylosed knee where the patella is adherent to the femur may produce fracture. Cases are recorded by Desault, Valette, and Marcy, where both patellæ have been simultaneously fractured.

Pathology.—1. Direct.—The superficial soft tissues will be found contused or lacerated. The line or lines of fracture may assume any direction, depending upon the point of application and character of the fracturing force—seldom, however, is it transverse. Paul Swain[3] records a case of the latter in a girl five years of age, who fell on some sharp shingle on the beach and divided the patella transversely as if the section had been made with a knife. The præ-patellar aponeurosis, the fibres of which we have already seen are mostly vertical in direction, is not lacerated to any great extent, hence there is less separation of fragments and greater tendency to bony union.

2. Indirect.—The line of fracture is transverse or slightly oblique, and at or just below the middle of the bone. The degree of separation of the fragments is dependent upon the condition and proportionate to the extent of laceration of the præ-patellar aponeurosis. If the aponeurosis remains intact or only slightly torn there will be little or no separation of the fragments and bony union will result.

When laceration occurs bony union without resort to operative measures is the exception. A satisfactory explanation of this was first given by MacEwan[4] in 1883. As already pointed out the laceration of the aponeurosis occurs at a lower level than the line of fracture and, the direction of the fibres being longitudinal, the free end presents a shreddy appearance. On the occurrence of fracture, the retraction of the quadriceps extensor tendon, from its manner of insertion into the upper fragment, tilts it forward so that the fractured surface presents anteriorly and those shreds instead of remaining free, become firmly entangled amongst, and mechanically intimate with the projecting spiculæ on the fractured surface, so that it is necessary to remove a thin section of the bone to free them. Flexion of the knee which follows the accident increases this tilting and entanglement. This condition of parts had been verified in cases of recent fractures operated on, and confirmed post-mortem by Rushmore of Brooklyn, in two cases where he found the periosteum lacerated at a lower level than the line of fracture and folded over the upper fragment like an apron. Riedel[5] has also found this condition post-mortem, and calls attention to rupture of the upper recess of the synovial cavity. Whether this occurs at the time or follows as the result of elastic compression applied, is uncertain. Experimentally he ascertained that with 200 c. c. of fluid in the joint cavity, the upper recess gave way under 25-30cms. pressure of mercury. Fowler[6] believes that this rupture may be produced by the same violence which fractured the patella.

Hæmarthrosis is always present but seldom to any great extent. Geo. R. Fowler[7] records a case of recurring hemorrhage. Soon after accident the joint became distended with blood. Under evaporating lotions and compression the hemorrhage was arrested and on the seventh day a plaster of Paris splint was applied. Three days later it was necessary to remove the splint on account of recurrence of the hemorrhage. Aspiration was tried but failed; cold compresses were again applied. On the fifteenth day after injury, the pulse and temperature rose and the tension of the joint increased. The joint was opened, a half-pint of coagulated blood turned out and the source of hemorrhage found to be the internal articular artery which had been torn across by the giving way of the accessory band of ligamentous tissue extending from the vastus internus muscle to the head of the tibia. This band was ruptured about one and a half centimeters below the line of fracture. Hemorrhage and effusion into the joint produces further separation of fragments by distension of the joint cavity.

Symptoms.—As a rule the diagnosis is easy. There is a history of trauma, or sudden snap in the knee with or without fall, pain, swelling and diminished or absolute loss of power of extension. In the direct form there is evidence of injury to soft tissues; the separation of the fragments is not marked because of a more or less intact condition of the aponeurosis; crepitus can be elicited, although not in every case. Morris[8] records the case of a girl who struck her knee against a chair, where careful examination failed to detect fracture. She continued to walk around, up and down stairs, with considerable pain and swelling in joint. Two days later a posterior splint was applied and on subsidence of the effusion, crepitus could be detected by fixing the patella between finger and thumb of one hand and carefully pressing with the finger of the other around the margin of the patella. An oblique fracture without separation of the fragments was thus diagnosed. Morris strongly recommends this method of examination in obscure cases.

A source of error, as pointed out by Tillaux, is an effusion of blood into præpatellar bursa which may give a sense of crepitation, and the blood clots may be mistaken for fragments.

The degree of separation in the indirect form depends upon the extent of the laceration of the aponeurosis. Morris has shown in the cadaver after subcutaneous fracture of the patella by a chisel, that when separation induced by bending the knee reaches half an inch, the aponeurosis gives way. Hamilton holds that separation of one inch indicates laceration of the aponeurosis. The extent of separation cannot be taken as an absolute criterion of the condition of the soft tissues. Upon this also depends the degree of loss of function. Tresort[8] records the case of a robust man who continued at work for three weeks, then suspected fracture from the swollen condition of the knee and on seeking advice two months later, a transverse fracture between the middle and lower thirds could be easily detected. MacEwan[1] also records the case of a student who fractured his patella while playing foot ball, who could walk without much difficulty or pain but with a sense of crepitation in the joint. Where the separation is well marked, a groove in the skin indicates the site of fracture. This can be deepened by flexing the knee —a proceeding always to be avoided because it increases the extent of laceration sustained by the soft tissues and the entanglement of lacerated fibrous tissue in rough fractured surfaces. It is the exception to be able to obtain crepitus in the indirect form unless the aponeurosis is intact. Crepitus may be found with laceration when the fragments are approximated. This occurs between the posterior edges of the fragments and is no indication of the absence of intervening soft tissues. The effused blood also deadens crepitation.

Prognosis.—Prior to the introduction of operative treatment, ligamentous union has been the rule, and when such anatomical defect exists there must remain more or less functional disability. Where the continuity of the bone has been restored by bony union the result is different. Then only can organic changes in the structures entering into the formation of the joint, or intrinsic injury to the quadriceps extensor muscle at the time of the accident, diminish the former strength and usefulness of the limb. With ligamentous union there remains weakness of the limb through loss of extensor power. This is evidenced by inability to bring the foot forward or to elevate the heel from the horizontal position of the knee extended. On slight flexion of the knee this can be accomplished. The shortened quadriceps extensor is put on the stretch and can then contract, or the fascial expansion of the vasti extending over the capsule of the knee laterally may act on the lower fragment. The latter applies more especially to cases where the upper fragment has become adherent to the femur and consequently cannot be acted on by the muscle, and where in flexion of the knee the inter-space between the fragments is increased. Bergmann[9] (1887), ascribes this diminished power of extension more to trauma sustained by the muscle than to incomplete consolidation. The degree of separation is not proportionate to the loss of power. Stimson[10] records a case with four and one-half inches of separation when the limb was extended, and although there was no power of active extension, except to a slight degree through the aponeurotic attachments in the position of nearly complete extension, four years after the injury the patient walked easily and securely; also Bryant[11] notes where with four inches interval, a man could ascend a ladder as well as ever.

Causes of Non-union.—The following causes have been assigned for non-union: separation of the fragments by the contraction of extensor muscle; effusion into the cavity of the joint; deficient blood supply, and the inter-position of the præ-patellar aponeurosis.

1. Separation of fragments by the contraction of the extensor muscle. The upper fragment is retracted by the muscle, which however soon assumes the condition of rest. If no attempts were made to bring the fragments into apposition this could be accepted as a cause, but this muscular contraction can be overcome in recent cases by pressure downward with the fingers. This MacEwan found to be the case where the parts were exposed shortly after the accident. In old cases with long standing ligamentous union the muscle is permanently contracted and here arises the difficulty of bringing the fragments into close apposition.

2. Effusion into the cavity of the joint. This effusion is a mixture of blood and synovial fluid and is at times well marked. Distension of the joint cavity may for a time further displace the fragments by forward pressure but, as absorption rapidly ensues, its effect can only be of temporary significance. Blood clot may form on the fractured surfaces and remain unabsorbed for a time. This condition exists in all forms of fractures, and can with equal truth apply to non-union in other localities. It does not however, and even an encrustation of blood on the surface of the fragments where accurate coaptation is not obtainable, may be of service in forming a transient medium in which the osteoblasts can obtain support and develop.

3. Deficient blood supply. The vascularity of the patella has been demonstrated fully by injection of its blood vessels and further by the parenchymatous oozing after fracture occurs, and of the character and extent of this we have ocular proof in operations on the knee joint, such as a resection where section of the patella is made. If this be a sufficient cause it should apply with equal force to other than transverse fractures, but the reverse holds that bony union generally follows in fractures resulting from direct violence.

4. Inter-position of the præ-patellar aponeurosis. This has already been referred to in the pathology, and all must admit this as a potent cause of non-union.

Treatment.—This consists in obtaining and maintaining accurate coaptation of the fragments accomplished either by mediate or immediate means of fixation, and the expectant plan or treatment by massage. The latter method was introduced by Tilamus of Amsterdam, who, at the French Congress of Surgeons in 1885, reported six cases with good results. On the first day he applies elastic compression and cold compresses to the joint, with elevation of the limb; on the second, while the fragments are held in apposition by the fingers, the thigh is thoroughly massaged. This is repeated every twelve hours. On the fourth day, passive and active movements of the joint are practiced, and on the eight day, the patient is allowed to get up. In the six cases the patients could walk by the fourteenth day and, in spite of movement, the distance between the fragments became daily less. He believes that rapid union and the early employment of motion are the best means to prevent shrinkage of the capsule, false anchylosis and muscular atrophy. Ligamentous union of considerable length occurred in every case. His results bear a very favorable comparison with cases treated by long continued fixation and confinement. Another interesting case in this connection is recorded by Flower.[12] It is that of a milkman, who continued at his work during the whole period of treatment. A posterior splint of light hoop-iron was shaped to the limb and held in place by straps and buckles. Rollers so placed as to secure the fragments in as favorable a position as possible, were held in place by adhesive plaster. The splint was discarded in about five weeks, and the result was as good as that which followsany non-operative method of treatment.

The variety and complexity of the means proposed for the mediate fixation of the fragments is a true indication of the difficulties to be overcome, and the general principle underlying all is fixation of the limb in the extended position, the bringing of the fragments into apposition and retaining them by direct pressure. The small size and mobility of the fragments render this a difficult task. Pressure exerted on the upper fragment, either by circular ring or oblique bandage of whatever character, compresses it against the femur, thus depressing the tendon of the quadriceps extensor, which, being inserted into the anterior surface of the bone, causes the fractured surface to assume an angle with the long axis of the limb. The same applies to the lower fragment but in a less marked degree. The fractured surfaces cannot thus be brought into accurate apposition throughout. They form, as it were, a V-shaped gutter, their posterior margins being in contact and the anterior separated. Further, the upper margin of the patella is not horizontal, the outer end being at a higher level than the inner, hence the coaptating pressure will act with greatest effect on the outer half, so that externally the fractured surfaces may be in apposition while the inner are apart and the upper fragment is rotated somewhat outward. This explains the condition found in ligamentous union that the bond of union is always longest on the inner side. Another danger of this backward pressure of the upper fragment is the formation of adhesions between the femur and patella. Retentive apparatus should never be applied immediately after the accident; if done then it would increase the tendency of the fragments to tilt forward and the constricting effect would tend to increase the intra-articular effusion.

Time should be allowed for the subsidence of swelling by absorption. This is best kept within bounds by the application of ice. Elastic compression by a rubber bandage is recommended by some, but this must be used with the greatest caution because, as Riedel pointed out, rupture of the upper synovial sac may be produced. Compression by wrapping the joint in a large layer of cotton-wool and applying a flannel bandage is much safer and answers the same purpose. To overcome this swelling, Schede, in 1872, aspirated the joint and irrigated with 3 per cent. solution of carbolic acid. He then coaptated the fragments as closely as possible with adhesive strips and applied a plaster-of-Paris dressing. This was renewed at the end of a week, the fragments being brought into closer apposition with the same dressing for fixation. If neccessary it was again renewed in a week. By this means he obtained osseous union in three cases and firm ligamentous union in two.

For a full review of the mechanical means that have been employed in the treatment of the fracture, I would refer you to a paper by Dr. Charles F. Stillman, published in the Journal of the American Medical Association, February 28th, 1891, entitled "A Historical Record of the Devices used in the Mechanical Treatment of Simple Fracture of the Patella."

The immediate fixation of the fragments is accomplished by hooks or by some form of suture. Malgaigne's hooks were introduced about 1840. They were soon discarded on account of the disastrous results following their use in pre-antiseptic times. In later years they have again come into use. Morton,[13] in 1882, expresses himself as greatly in favor of a modified form of Malgaigne's hooks where the space between the hooks could be varied. He applies them about the fourth day and removes them in sixteen or seventeen days. He, in 1873, had a case in which the original separation was two inches and where after repair, it was impossible to detect which patella had been fractured. Treves,[14] in 1886, had the hooks made in two parts, introduced the points firmly into the bone through four small openings made in the skin by a tenotome, brought the segments together and screwed the fragments into close apposition. The hooks were allowed to remain *in situ* six weeks. The same author,[15] in 1892, exposes the fragments, clears away all intervening fibrous tissue and applies the hooks in the same manner. Levis modified them by dividing them into two independent pairs, so that the points could be inserted wherever desired.

The fixation of the points by suturing was proposed by Severino in the sixteenth century, and was first put into practice by Rhea Barton in 1834, and later by McClellan in 1838, (Dennis);[16] again by Cooper, of San Francisco, in 1861, and since, by Logan and Gunn, of Chicago, (Jalaguier)[17]. Of these five operations, two terminated fatally and of those that recovered nothing definitely is known. The operation was re-introduced by Cameron, of Glasgow, in 1877, who sutured the patella with wire in a case of ruptured ligamentous union. Lister,[18] in the fall of the same year, operated in a similar manner fourteen days after the accident. In 1879, Bell reported to the Medical Society of London, a case where he wired the fragments sixth months after fracture, and Rose two cases on the nineteenth day. This free opening of the knee joint and suturing of the fragments, generally known as Lister's operation, did not meet with general approval and surgeons looked for some less hazardous means of accomplishing the same end.

Kocker, in 1880, passed a silver wire vertically through the joint behind the fragments and twisted the ends over a piece of gauze in front of the bone, tightening it daily until the fragments came together. He only obtained diminished separation with fibrous union. Barker,[19] in 1892, made a similar operation subcutaneously and at the same time evacuated the blood from the joint.

He introduces a narrow bladed knife into the joint through the middle of the ligamentum patellæ, makes an incision downward for two-thirds of an inch, through which he expresses the fluid contents of the joint cavity (operating within twelve hours of the accident), introduces a needle fixed in a handle, passes it behind the patella upwards through the middle of the quadriceps extensor tendon and cuts down on it when it reaches the skin. The needle is protruded, threaded with silk and withdrawn, it is again introduced through the lower incision, passed in front of the fragments and out through the same incision above, threaded with the free end of the silk and withdrawn. In making the incisions care is taken that they extend down to the bone so that no fibrous tissue may intervene between the suture and the bone. The ends of the suture are drawn tight and at the same time, the fragments are forced into apposition and rubbed by lateral and anteroposterior movements against each other, until it is felt that any blood-clot or other material is dislodged. The suture is then tied on the lower border of the patella and the ends cut short and buried. An ice-bag is applied and the limb placed in a splint for eight or ten days, when it is removed and the patient is allowed to get up with a splint on, and to walk at the end of five weeks. He reports four cases treated thus, with bony union. Volkman passed a silk suture through the tendon of the quadriceps and the ligamentum patellæ and tied the ends in front of the joint, over a roll of gauze. Stimson[20] accomplishes the same thing subcutaneously. He makes four small incisions at the angles of the patella, introduces a Hagedorn needle threaded with silk, passes it subcutaneously through the ligamentum patellæ and brings it out at the corresponding incision on the other side. He then reintroduces it at the point of exit, passes it along the side of the patella and out through the opening above, and so on until the silk has surrounded the whole bone. The fragments are drawn together by tenacula inserted above and below, the suture pulled tight and tied and the incisions closed by catgut suture. By this method the joint is not invaded. He reports twenty-five successful cases. Mayo Robson passes steel pins through the tendon, approximates the fragments and retains them by a figure-of-8 suture round their projecting ends. Marshall, of University College, in 1878, transfixed the two fragments with steel rods and brought them into contact by tying the ends of these rods together on either side, outside the skin. This procedure was brought forward by Lund, of Manchester, in 1882, and by Myles, in 1889. Ceni (Genoa) after preliminary aspirative irrigation of the joint, brings the fragments together by the figure-of-8 sutures of silver wire passed obliquely through the substance of the patella and round its upper and lower margins. Aiken proposes to pass a silver wire suture vertically through the boneand skin.

In the history of the following case will be described the operation by athrotomy and suturing. The majority of surgeons prefer the longitudinal incision; Phelps adopts the transverse; following the sulcus between the fragments. As to the time for operating in recent cases, it is better to wait until all danger of inflammatory symptoms from the trauma is past.

C. W., 22 years of age, on April 7th, 1891, sustained a transverse fracture of the right patella while endeavoring to prevent three horses hitched to a tread mill from running away. In doing this he states that he threw his right leg forward, braced himself on it, felt something give way in the knee, fell, then got up and walked about eight rods to a house. A physician was called, who found a transverse fracture below the middle of the bone. Cold water dressings were applied for ten days and then plaster-of-Paris fixation for six weeks; crutches used thereafter until the end of June, walking was attempted and on the third day re-fracture occured. The patient was admitted into the Milwaukee Hospital July 2nd, 1891. On examination there was found considerable effusion into the joint, discoloration of overlying soft tissues and separation of fragments about one inch. It was impossible to bring the fragments into apposition. A posterior splint was applied with moist antiseptic compresses over knee, for twelve days. By this time discoloration had completely gone and to a great extent the effusion into the joint.

On July 15th, 1891, under strict antiseptic precautions, the joint was opened by longitudinal incision in the middle line of the limb. On exposing the seat of fracture and separating the fragments, a quantity of bloody synovial fluid escaped from the joint cavity. Both fragments were freely movable and the interspace, one-half inches in the extended position, was occupied by a band of dense fibrous tissue which had given way close to the lower fragment. The fractured surface of the upper fragment was directed forward and that of the lower upward. There was laceration of the capsule laterally to the extent of one inch. There was no attempt at bony union. A small piece of sterilized gauze was placed under the fragments to guard against injury to and soiling of the joint cavity. Thin sections of bone with the attached ligamentous band were removed. Three holes extending down to but not perforating the articular cartilage, were drilled obliquely, at corresponding points in either fragment and sutures of silk-worm gut introduced. When these sutures were drawn tight the fragments were still half-an-inch apart. To overcome this, the limb was elevated to the perpendicular, i. e., flexed at right angles to the trunk and firm downward compression made on the extensor muscles. This brought the fragments into accurate coaptation. The silk-worm gut sutures were tied, ends cut short, aponeurotic coverings of the bones and capsules sutured with cat-gut, and the external incisions with silk. A copious antiseptic dressing was applied, the limb placed in a long posterior splint with a foot piece and over all a plaster-of-Paris dressing from toes to groin.

The further progress of the case was uneventful. The limb was maintained at right angles to the body for ten days and kept elevated for two weeks longer. The dressings were changed on the eighteenth day, when the incision was found united thoroughout and to all appearance commencing union between the fragments. The limb was kept in plaster-of-Paris for four weeks longer, all dressing discarded and the patient was allowed to walk with the aid of crutches. On Sept. 16th, he left the hospital with the patella firmly united; able to flex the knee to a right angle and to walk without the aid of a crutch. When last seen, one year after, the continuity any outline of the patella were normal and the functions of the limb completely restored.

For suturing material silver wire has been most generally employed—platinum wire and catgut have also been used. MacEwen recommends that the wire should be extracted after it has served its purpose; others leave it *in situ,* hammering the ends into the bone. Partia necrosis of the fragments have followed its use, but the rule is that it causes no disturbance.

Chaput[22] reports successful cases by silk suturing of the fibro-periosteal covering of the bone. If continued success follows this method, and, unless it be the difference in degree of the trauma, there is no reason why it should not, as this proceeding suffices in cases where the patella is divided in re-section of the knee, a decided advance has been made in the treatment of this fracture. In old cases, to overcome the difficulty of approximating the fragments, various expedients have been resorted to. MacEwan[24] recommends a row of V-shaped incisions in the tendon of the quadriceps above the patella. This avoids complete section and gains considerable length.

Stankiewicz,[23] in a case of refracture after seventeen weeks, had to avoid the tendon of the quadriceps and ligamentum patellæ so as to suture the fragments, which united firmly with anchylosis and the patient walked well without assistance after three months.

R. Park[24] divided the tendon of the quadriceps in a case of long ligamentous union with good result. The danger of section of the quadriceps tendon is necrosis of the upper fragment. Von Bergmann[25] records such an occurrence. He chisels off obliquely the tuberosity of the tibia and fixes it below the knee joint.

The results obtained by mediate approximation are decidedly bad and unsatisfactory when compared with those following immediate fixation, and the question should all recent cases, and old ones entailing functional disability, be submitted to operative treatment, must be given an affirmative answer, except in very exceptional cases where the prœ-patellar aponeurosis remains intact and unless contra-indicated by age and constitutional conditions. As to operation, that by arthrotomy and suture, either of bone or overlying tissue, should be adopted. Here the surgeon can determine the exact condition of the parts, evacuate the blood from the joint and absolutely satisfy himself as to the accurate coaptation of the fragments. Disastrous results have followed this operation, but they can all be traced to one cause, viz, sepsis. Pilchner,[26] in 1890, collected 132 cases operated on by the following surgeons: Phelps, 44 cases; Dennis, 30; Fluhrer, 16; Stephen Smith, 15; Lucas Championniere, 14, and MacEwan, 13. To these can be added 5 cases by Pilcher and 11 by R. Park,[24] in all 148 consecutive cases without any bad result. The same writer in summing up the situation at that time writes: "It is apparent, as we view this whole question dispassionately, that the justifiability of arthrotomy and suture of the patella after fracture, depends entirely upon the reliability and adequateness of the resources which surgeons possess to prevent septic infection of the wounds made. Now this cannot be a matter of theory; it is a matter of experience and practice; 148 cases in the hands of different surgeons, in which the knee joint is widely opened and the constituents of the joint freely handled for considerable periods of time, and all with immunity from septic infection, is sufficient demonstration that reliable and adequate precautions against harmful sepsis are possible to be obtained by sufficient care and knowledge. And, *per contra* the disastrous suppurations, entailing many times amputation and death, that have been reported from other observers, show the results that may follow imperfect antiseptic details and warn against the indiscriminate practice of the operation." This is equally true at the present day. All operative procedures, with the exception of Treves, modified use of Malgaigne's hooks, exclude the possibility of determining the condition of the præ-patellar aponeurosis and cannot guarantee the accurate coaptation of the fragments.

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1 *Annals of Surgery*, Vol. V, p. 181, 1890.
2 *Fractures and Dislocations*, Stimson, Vol. I, p. 547.
3 *British Medical Journal*, Nov. 15, 1890.
4 *Lancet*, Nov. 17, 1883.
5 *Centralblatt fur Chirg.*, No. 12, 1890.
6 *Annals of Surgery*, Vol. XIII, p. 31, 1891.
7 *Annals of Anatomy and Surgery*, Vol. IV, p. 226, [1882.
8 *Holmes' Surgery*, Vol. I, p. 1029, 3rd. American Edition, 1883.
9 *Deutsche Med. Wichenschrift*, Jan. 6, 1887, No. 1.
10 *Fractures and Dislocations*. Stimson, Vol. I, p. 554.
11 *Lancet*, Nov. 22, 1879, p. 768.
12 *Reference Hand-book of Med. Sciences*, Vol. V, [p. 529.
13 *Trans. American Surgical Association*, Vol. I, p. 105
14 *British Med. Journal*, July 24, 1886, p. 153.
15 *Operative Surgery*, Treeves, 1892, p. 593.
16 *New York Med. Journal*, April 3 and 10, 1886.
17 *Med. Chronicle*, Vol. I, p. 59.
18 *British Med. Journal*, Nov. 3, 1883.
19 *British Med. Journal*, Feb. 27, 1892.
20 *American Text Book of Surgery*, p. 317.
21 *New York Med. Journal*, May 10, 1890.
22 *Annual of Universal Med. Sciences*; Vol. III, I, VII, 1892.
23 *Centralblatt fur Chirurg.* No. 34, 1887.
24 *Amer. Journal of Medical Sciences*, Vol. 104, p. 685, 1892.
25 *Deutsche Med. Wochenschrift* No. 1, 1887.
26 *Annals of Surgery*, Vol. XII, p. 401.

CLINICAL LECTURES.

STRABISMUS, OLD DISLOCATION OF SHOULDER WITH INJURY OF BRACHIAL PLEXUS, PROLAPSUS RECTI.*

ROSWELL PARK,† A. M., M. D.

This first case is one strabismus, a condition inwhich one or other rectus muscle is in a state of contraction or is naturally two short, and where the indication is to relieve the inequality by dividing the short tendon. You have seen tenotomies done scores of times for the relief of club foot and similar conditions. In such cases the operation is done subcutaneously and with aseptic precautions. Here, although the instruments used are aseptic, we cannot be sure of excluding bacteria from the wound and it is left open.

Most cases of cross-eye are due to hypermetropia. For distant vision the axes of the eyes are parallel, for near objects, they converge. The strain of focussing the eyes on near objects causes a spasm of the internal muscles and indirectly an actual shortening of one tendon or both.

After doing away with sensibility by means of a four per cent. solution of cocaine, the eye speculum is put in position. The little operation leaves a small raw surface, it is well therefore to use a boric acid collyrium for a few days, but these wounds about the eye seldom go wrong. The patient instinctively keeps the eyes clean during the process of healing and the tears are saline and to some extent antiseptic. If, therefore, the instruments are clean at the begining septic infection is unusual, and although the wound is an open one, it practically heals by first intention. For forty-eight hours after operation, cold applications are used to prevent too large an ecchymosis and outpouring of blood. After this the eyes are used moderately, for too long a rest would weaken the muscles. Even after twenty-four hours, the eyes might be used for a time and then rested while cold applications are used.

The next case is that of a man between fifty and sixty years of age. Five months ago he fell from a high straw stack and injured his shoulder. His arm was paralyzed, or at least useless, immediately after the accident. Some hours later a number of local physicians saw him, administered an anæsthetic and made some manipulation of the shoulder. From this meagre history, it is impossible to decide as to the exact nature of the injury and whether he is right or wrong in blaming his physician for the present uselessness of the arm. The shoulder is at present almost completely ankylosed. I can move the arm, but the scapula moves with it. The deltoid is atrophied and there is paralysis of most of the other muscles of the limb. He cannot move the fingers nor can he feel anything in the hand. The head of the bone is displaced downwards in subcoracoid dislocation. It is altogether probable that at the time of the accident, the head of the humerus was driven with crushing force against the circumflex nerve so that the symptoms of deltoid paralysis are the inevitable result of the injury. It is not quite so easy to dispose of the responsibility for the dislocation. It is evident from the account of manipulations under anæsthesia that a dislocation was diagnosed or at least suspected. It is possible that the capsule was so extensively lacerated that reduction of the dislocation was readily accomplished but that the head of the humerus slipped out of place again later, perhaps on account of carelessness of the patient.

The shoulder is at present utterly useless, it is tender and painful and there is complete loss of function. There remains only one indication for relief, namely to resect the head of the humerus and allow a new joint to form. It may be that the paralysis is perpetuated by the pressure of the bone on the brachial plexus. The patient is not too old to make a good recovery from the operation and there is practically no contra-indication. The only question is whether the nerves will recover their proper function after the removal of the head of the humerus. I have made no promises to the patient on this score. After the operation has been recovered from, we must begin with massage and the continued current passed through the nerves so as to thrill them with something like the original vital current, whatever that may be. We must also use the faradic current to stimulate and restore nutrition to the muscles. Hypodermic doses of strychnine, which is the best nerve stimulant, will also be used. But any or all of these means would probably be useless without the removal of the bone which now acts as a foreign body. I must remind you that the circumflex nerve which supplies the deltoid is notorious for the frequency with which it is injured in accidents to the shoulder joint. I have repeatedly known patients, lawyers and the laity in general to blame a doctor for this paralysis when he was entirely blameless.

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Now that the patient is anæsthetised, I find that there is a little mobility of the shoulder joint which was not obtainable before. This, however, does not alter the indications for operation. The incision is ordinarily made along the bicipital groove, but here there is no object in trying to avoid the deltoid and I shall go through the remnant of that muscle. I have now come to the head of the humerus lying beneath the coracoid process and the chain saw is passed around the surgical neck of the bone. After sawing off the bone, there is little hemorrhage. The wound is closed with four catgut sutures, leaving a little space at each end for drainage. Iodoform is dusted on and the neighboring skin smeared with a sterilized ointment of resorcin and naphthalin. Over this the ordinary antiseptic dressing is applied.

The next patient is a decrepit woman of 75 who has had prolapse of the uterus for about 20 years. This, however, is not the condition for which she now seeks relief. A few days ago she fell down a short flight of stairs and hurt herself in some way—she does not know exactly how. Then she experienced pain in the rectum and the bowel protruded causing her great distress. She has had only one small stool in three days. Along with her prolapse of the uterus, I find that she has a complete rupture of the perineum which has undoubtedly predisposed to the prolapse of both viscera.

The most frequent cause of prolapse of the rectum, when there is no hemorrhoid or other anatomical alteration, is long continued constipation. Not only is the lower bowel stretched by the retained fæces but after a time the sphincter loses its tone and in some act of straining, the rectum is pushed out. Prolapse of a pile is quite a common occurence and one which may be mistaken for a prolapse of the bowel proper. In fact, whenever there are aggravated piles there is a tendency to true rectal prolapse in addition. Prolapse of the rectum is quite common in children and especially in little infants. It occurs during the straining of defecation and often goes back of itself or it is recognized by the parents or nurse and returned at once as it always should be. Sometimes it is necessary to give an anæsthetic in order to reposit the bowel. The red cuff of mucous membrane is easily distinguished from the surrounding skin. In old cases in which the bowel has remained outside, the mucous membrane becomes greyish and leathery and partakes of the character of skin.

The best drug for prolapse of the rectum is ergot, not given by the mouth but in suppository. For a little child, a gelatine coated pill of ergotin (ten to twenty centigrams) may be used as a suppository after each defecation. In a case of longstanding, however, more radical measures are necessary. There are two ways of operating on such cases. If the bowel goes back easily and simply gives trouble by its tendency to fall out again, you may make ten or twenty linear cauterizations, parallel to the axis of the rectum. Each stripe made by the actual cautery leaves a linear ulcer and as the ulcers heal, there is cicatricial contraction sufficient to restore the rectum to its normal size. The connective tissue of the scars also furnishes an artificial rigidity such as the rectum naturally possesses but is lost in the prolapsed bowel. This case, however, is a different one from what I have described. The rectum has remained outside the body for several days, it can not be returned easily through the anus, in fact, it has become somewhat strangulated. The best way to treat this is to regard it as we would a protruding mass of hemorrhoids, that is as a foreign body to be removed. The cuff is split longitudinally and each half snipped off with scissors in sections, suturing as the excision progresses, so as to control hemorrhage. The operation is a simple one because the mass is entirely outside of the body.

COMMUNICATIONS.

GENERAL PARALYSIS OR PARALYTIC DEMENTIA.*

D. R. PELTON, M. D.,† TOPEKA, KANSAS.

This disease offers to us a large field for study, for pioneer work, notwithstanding the disease has long been known.

There are, indeed, so many phases of nervous disturbance with mental derangment classified as dementia or general paralysis that it has been and is now a question by some authors if we have not classified several diseases as one.

Then again, the early symptoms are are so obscure that it is difficult to make a diagnosis sufficiently correct to give the patient the benefit of an early and intelligent treatment.

While heredity unquestionably furnishes a basis for its development, there are yet other factors equally as potent in their effect, viz: The rapid push of American trade, the arduous tasks and struggles for promotion in our present system of education as well as in immoral practices and dissipation.

The need of our profession of to-day is an early recognition of these cases which have a paretic tendency. This is not easily done, perhaps, in the field of general practice, for the classification of the various nervous derangements and their phenomena would be as laborious as the naming of the stars in the canopy of heaven. But enough can usually be seen to suspicion some mental or nervous derangement and justify the aid of a consultation, as you would call an oculist or gynecologist, and classify as early as possible the functional from structural diseases, the systemic from the local, and thus fix a basis from which to establish intelligent treatment.

Rather than weary with a long essay on the history of this disease, or with the anatomy, physiology and histology of the brain which you all have access to in medical works, I will simply report three cases out of the number which have come to me, and although the nervous phenomena were well-marked, the true nature of the trouble was not disclosed to their family physician and friends.

CASE 1. Mr. A., a contractor, aged 50, while on duty received an injury of the right leg from a fall, and for several weeks was obliged to walk with crutches. Suddenly paresis developed in the right arm. At the expiration of about three weeks (entirely discarding the crutches during the time) he came to me through the kindness of his physican for examination and treatment.

On investigating the case, I found incoordination in walking aside from lameness from fracture, a stiffness and unwieldiness of the muscles of both legs and dizziness. A nearly normal sensibility in the right arm and hand, but motor power greatly diminished. There was also, incontinence of urine, loss of sexual power and constipation from lack of peristalsis, (these latter troubles having come on gradually since a severe sickness about nine years ago) constantly soiling his bed and clothes, to which he seemed to pay little attention.

He had also deafness in the left ear both with and without contact, coming on simultaneously with the vesical trouble; he also complains of or describes formication of the left face, by leading him indirectly with questions.

I found, too, some vaso-motor disturbance, and a stolid mental state, but he was excitable and fault-finding at times, was troubled with insomnia, had hallucinations of sight and sound, saw persons walking around his bed, beautiful flowers on the wall; said they disturbed him, but said, also that he knew they were aberrations; that is, he was able to correct the hallucinations as he did also the illusions which he had.

These statements were not voluntary, but drawn out by conversation.

His speech was a little blurred, psychic word tract sluggish; patient admitted abrasion and sores on glans penis in early life, but they were said not to be of a syphilitic nature. Also admitted making liberal use of spiritous liquors, although not to the extent of drunkenness; his history dated back some nine years.

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* Read before the Kansas State Medical Society May 12, 1893.

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Case 2. Mr. S.; a farmer,aged 31; single; has ataxic speech and unsteadiness of gait and dizziness, which has come on slowly for the past three years; mental condition is sluggish and came on gradually for eight years past, at which time he was disappointed in marriage. His father died aged 50, of pneumonia; he has a brother similarly effected.

On examination I find knee reflexes good, no ankle clonus, sensation normal but slow, muscle sense impared somewhat, incoordinate locomotion, feet stand apart, he inclines toward left side, left shoulder droops. Some difficulty in standing with eyes closed, muscle strength good, uvula deviated to the left and left pillar of fauces droops and its sensory reflex is lost. Tongue protruded with difficulty. The pupil of the right eye larger than the left and less active to light. Memory poor, mind sluggish, despondent and abstracted, attention slow and of short duration. Bulbar trouble. Speech under effort explosive. He was treated for catarrh and afterwards sent to a specialist for nasopharyngeal tumor; none found, but paralysis of palatal muscles; referred to me for examination and treatment. April 9th, ecchymosed palate slough on pharynx and uvula from loss of inervation.

Case 3. Mrs. O., aged 52, wife of a financier. The history of her case gives a gradual change in her disposition which came on after a heavy financial loss, six years ago. Great emotional excitement, fits of crying and despondency, with vaso-motor disturbance within the last three years, followed by hypochondriasis and suicidal suggestions. She has delusions of pending starvation and friends turned into enemies, is easily excited at times. is insomnolent. Has decreased in flesh from 200 pounds to 125 pounds. Has weakness in right leg with formication and hyperæsthesia, tactile sense about normal; had decided paresis in same leg ten months ago. Right leg above knee measures one inch less than left, and below knee one and one half inch less. The tongue on protruding deviates to the right. Reflex in left eye normal,but absent in right,pupil reflexes normal; at times quite talkative. Urine on examination diabetic and history seems to indicate its existence for several months. This case also has some peculiarities; just how much the diabetic urine depends upon the nervous derangement and how much of the nervous derangement depends upon diabetic urine you may conjecture.

I have chosen these cases on account of their opposite characters.

As you will observe, the departure from health in the first case was in the sensory and lumbar cord-center and later affected the mental and voluntary motor powers. While in the second case and also in the third mental deterioration came first and was followed by paresis in its various forms.

There was a time before the decided mental and somatic changes took place in each case that the difficulty rested in the circulation and nutrition simply, but the question arises, what caused these changes in the vaso-motor and trophic centers?

In the one case it might have been excited by alcholic excess or from the sickness in former years.

In case No· 2, a hereditary tendency may have figured, as a brother seems to be following in the footsteps of this disorder, and yet some say heredity is nothing, or if it is, it must be transmitted by a microbe in the spermatic fluid through the germ or through the circulation by the mother.

In both the second and third cases perhaps the exciting cause was the taxation of the emotional centers, thus exciting vaso motor disturbance, resulting later in vacuolization of the spinal and ganglionic and cortical cells, ushering in the somatic phenomena described by some authors.

In cases of paralytic dementia, aside from those of traumatic origin, there are those of a functional nature which sets in action the prenatal tendency. In the primary stage there undoubtedly exists a simple functional and vaso motor disturbance. It may commence in various localities depending upon the excitant cause and having a tendency to assume a progressive course. The capillary vessels in the brain become dilated and leucocytes migrate into the perivascular space, the lymph channels become clogged with accumulation of lymph cells and they press into the inter-spaces. Now changes commence in the protoplasm, for metabolic actions are diminished from less trophic stimulus in the gray matter. The nuclear and cortical cells undergo a granular degeneration of their protoplasmic substance. The accumulated and enlarged lymph cells surround the cortical brain cells and feed like phagocytes upon the pratoplasm to the evacuolization of their cell body. Perphaps this brain will illustrate the case more fully."

I here present a brain of a man which has some of the characteristic of a paralytic dement. The dura was adherent to the vertex, the *temporo sphenoidal* and *frontal lobes*, and was torn in removing. A degenerative change has taken place from the previous changes of the cortical vessels, causing a porous appearance of the tissue. The vessels are enlarged and torturous. The patient died in a state of delirium and convulsions, succeeding a condition of mental deterioration which had progressed gradually for the past eight years.

Could we expect less in this condition than mental deterioration loss of functional activity and impaired sensibility when the brain and cord are thus affected.

This is but the commencing of a more lasting structural change upon which depends the multitude of paralyses and violent mental conditions that require commitment to state and private institutions for treatment, care and restraint.

Now, the neuroglial cells and leucocytes have undergone structural changes, also, elongating and contracting like connective tissue, multiplying the neuroglial structure and diminishing the myaline, making the condition known as sclerosis of the brain and cord.

To numerate all the changes would take a space I cannot demand. I have only spoken of some of the most prominent changes, that your attention may be called to the investigation of its morbid anatomy.

Now, what can we expect from treatment? Surely in the last stages we have little hope of bettering their condition. In the second stage we may possibly modify or postpone the fatal issue for a time, but in the *early* stage, before vacuolization of the cells has taken place, is when we must meet the demands for interference.

Again, a difficult problem rises before us. How shall we reach the case in its early history when naught but vaso-motor and functional changes can be found. It is only by eternal vigilance we are able to read the hand writing upon the wall, and who in the busy crowd of general practice is able to discern the small dark cloud which in time shall obscure intellectual vision or burst like a cyclone into a fit of maniacal furor compelling some measures of restraint of the unfortunate victim.

While this class of diseases is steadily crowding on in our rapidly developing civilization amid the struggle for supremacy and prosperity with its accompanying emotional tension, our profession is rushing away in search of the microbe or to climb the mount of glory in operative surgery while mental and physical decline is lying at our door unheeded.

To amputate useless members is well, to remove an offending tumor from the abdomen is grand, to excise a growth from the field of the brain with success is noble, but to be able to avert the necessity for the same is the greatest of all.

It is not a matter of new remedies in the treatment of these diseases, for the physician of to-day is loaded down with drugs. As the warrior of old was powerless in his coat of mail (when down could not rise to his feet and when up could hardly stand,) so we are encumbered with a mass of useless stuff which hinders our better use of medicine.

More study of the nature of disease and less attempt at speculative and heroic treatment without an understanding of its pathology would increase our success.

In fact, if our foresight was as good as our hindsight, we might save many a body from being a physical and mental wreck.

But, as hard as we may labor and as high as we may attain in our profession, the generations to come shall climb on and up the towering heights of science until *we* look like mere pygmies below. But we may glory in the fact of being the stepping stone to their success.

Japan's Jinriksha Runners.

Jinriksha runners in Japan are hardy fellows. There are not less than 30,000 of them in Tokio alone; and the trade seems a popular one all over the country. One man pulled a jinriksha for over 30 miles, and when asked if he were tired, said: "No, by the grace of God I am never tired," and went on cheerfully for another 10 miles.—*London Million.*

What is becoming in behavior is honorable, and what is honorable is becoming.

WHY ELECTRICITY SOMETIMES FAILS TO CONTROL UTERINE HEMORRHAGE.*

AUGUSTIN H. GOELET, M. D.†

In a former lecture I told you that one of the principle uses of the constant current was for the control of the uterine hemorrhage, and showed that this was obtained by electrolysis of the tissues in contact with the positive pole. I will reiterate that contact, not instantaneous, but more or less prolonged, is absolutely essential in the majority of instances to produce this result. That is to say, while moderate hemorrhage from the uterus may sometimes be controlled by the application of the ball electrode connected with the positive pole in the vagina, it is more often necessary for a bare metallic or carbon electrode to come into actual contact with the endometrium. The reason for this is obvious when you recall the fact that electrolysis is more pronounced at the location of the poles, i. e., where the electrode is in contact with the electrolyte. The action which brings about this result (the control of hemorrhage), is due to several things operating together; *first*, an electrical osmosis which takes place in the direction of the current from the positive to the negative pole, whereby depletion with paling and drying of the tissues in the vicinity of the positive pole is produced; *second,* the congestion or blood stasis of the uterine body or attached fibroid mass is relieved; *third*, the detachment of adhesions between contiguous peritoneal surfaces, which is one of the first results observed from the use of the current, allows the mass to rise in the pelvis and removes one of the causes of obstructed circulation; *fourth*, cauterization and destruction of the diseased endometrium resulting from the liberation of oxygen, chlorine, acids,etc., at the point of contact of the positive pole with the tissues produces eventually a dense, unyielding eschar which acts as a barrier against subsequent bleeding.

One of the most frequent causes of failure to control uterine hemorrhage with this agent is due to imperfect and insufficient contact of the electrode with the whole endometrium during the application. This may be due to a faulty method of application, or a condition of affairs may exist which will preclude the possibility of placing an electrode in contact with every portion of the endometrium, in which case failure is unavoidable. The platinum sound electrode which is constructed so as to expose any length of metallic surface desired, according to the length of the canal, that the whole canal from the external os to fundus may be exposed to the local action of the current, is necessarily limited in usefulness, because its diameter is so small that contact with the walls of the canal is only possible when the canal is narrow and not dilated. Therefore the attempt to control hemorrhage with this electrode where the cavity is dilated or where its diameter is abnormal will prove a failure. If the canal is tortuous or the calibre is almost obliterated by the projection of an interstitial fibroid into the cavity, or if a sharp angle is formed by the fundus being dragged down by the weight of a fibroid in the upper portion of the uterine wall, it will sometimes be impossible to introduce any kind of electrode the full length of the canal. It often happens that the portion beyond the constriction or obstruction is greatly dilated while that below is of moderate calibre, and if it was possible to introduce an ordinary electrode beyond, effective cauterization would not be possible because of imperfect contact with the walls.

When the cavity is too large to permit the platinum sound being used satisfactorily, the carbon electrodes, which are of different size, are employed and the cauterization is done in sections. A size is selected which will fit the calibre of the canal and it is passed to the fundus, where it is allowed to remain for five minutes while the current is turned on; then, without turning off the current, it is withdrawn a certain distance and another section of the endometrium is submitted to the action. This is repeated until the canal of the cervix is reached, which should not be submitted to the caustic action of the current with the large carbon electrode as stenosis would surely follow. When the platinum sound is used, it is not so important to exclude the cervical canal, as the plug of cervical mucus acts as a protection and prevents extensive cauterization here. The introduction of the large carbon electrodes would, of course, remove this secretion. When an accessible constricttion, such as narrowing of the cervical canal, prevents the introduction of a carbon electrode of sufficient size to fit a dilated cavity above, I dilate with a steel dilator.

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*A Lecture delivered at the West Side German Clinic in the course of Clinical Instruction in Gynecological Electro-Therapeutics.

†Gynecologist to the West Side German Clinic; President of the American Electro-Therapeutic Association; Fellow of the New York Academy of Medicine and of the New York Obstetrical Society; Member of the Societe Francais d'Electrotherapic, etc., etc.

I have been much surprised at the ignorance displayed by some physicians otherwise well informed, regarding the manner of the action of the current upon the surface to which it is applied to control bleeding, and this is another cause of failure, for which, however, the agent is not responsible. It, nevertheless, frequently operates against its more extended application in these conditions, as well as in others where it could be used with benefit if intelligently employed. For instance, a remarkably well informed gynecologist once said to me that he had no confidence in any of the statements concerning the value of electricity in gynecology because it had failed completely to control uterine hemorrhage in a case where he had conscientiously and faithfully tried it. I replied that his failure was probably the result of imperfect contact of the electrode with the endometrium and consequently ineffective cauterization of the whole surface.

"Oh! no," said he, "I am sure that I cauterized the whole surface because I was very particular to move the electrode freely about in the cavity so all parts would be touched by it."

"Did you," said I, "hold the electrode still in one place for five minutes and then move it to another and so until the whole surface had been included, or did you keep the electrode moving about?"

He replied, "I kept it moving all over the surface, of course, so as to be sure no spot was omitted,"

I had some little difficulty in convincing him that an intra-uterine electrode should not be used as a curette, and that it in no way resembled the actual cautery or stick of lunar caustic which takes effect as soon as it touches; but that, on the contrary, the cauterization was due to a chemical action, resulting from decomposition of the tissue elements, which could not occur to any great extent instantaneously, but required prolonged contact. To convince him I had to remind him that a red hot coal could be rolled about in the hand without injury if the motion was rapid. As this conversation took place within the last two years it appeared to me an unwarrantable unfamiliarity with a subject which has been so freely discussed in medical literature. Doubtless, many other failures have occurred in the same way, and many other physicians are deterred from using a valuable therapeutic agent, because errors of a similar nature have caused them to have no confidence in it.

Another casue of failure which in some instances may cause its abandoment, is the attempt to check hemorrhage while the bleeding is very active. This will nearly always fail, (though it is sometimes possible) because the blood flows away so rapidly around the electrode that the chemical action on the tissues is prevented. The action is expended upon the blood filling the cavity, which is constantly refilled as it becomes emptied, and the result of the decomposition is constantly being washed away. The most appropriate time for the application in the case of hemorrhagic fibroids it will be productive of the greatest benefits, is during the interval when there is no bleeding. However, if the applications are persevered with and are properly made they will, in the majority of cases, control an active hemorrhage, but success should not be expected from one or two or several applications at this time. It is here that I think Gautier's Cupric Electrolysis is particularly appropriate. It may be employed in the midst of an active bleeding with certainty, since the decomposition of the copper electrode by the action of the positive pole liberates an astringent salt, the oxy-chloride of copper, which produces coagulation. An additional reason for an immediate result lies in the fact that it is driven into the tissues by electrical osmosis, and the structures for some distance beneath the surface are stained by it. No harm results from the absorption of this salt, as Gautier showed by experiments upon rabbits. This will be borne out by the observations you have been able to make upon the patients you have seen treated here by this method. You have seen it control hemorrhage when curetting the uterus and packing the vagina with cotton have failed, or when they have only controlled it temporarily. You will recall the patient Mrs K., who was here on the last clinic day. The hemorrhage which had recurred after the use of the curette and washing out of the cavity with a strong solution of iodine, you observed, was promptly and permanently controlled by cupric electrolysis. I suspect malignant disease in this case because the bleeding was so profuse and uncontrollable when the curette was used and because I found that the cervix had been amputated in some other institution about eight months since.

I make no objection to curettment. It has its uses and possesses many advantages. You have seen me make use of it when I thought it more appropriate than the other measures we usually employ here for the control of hemorrhage. The application of the current in these cases possesses this advantage over the curette, however, that it can be employed in office work and an anæsthetic is never required.

These remarks will prepare you for some of the failures you may expect and enable you to turn them into success in some instances. They may likewise enable you to correct some unfavorable criticism regarding the value of this agent.

TRICHINOSIS.

F. W. WILCOX, M. D., Minonk, Ill.

Jan. 9, 1893, I was called to see the wife of A. J., supposed to be suffering from some complication of the mumps. On inquiring into the history of the case, I found she had taken sick about Dec. 19th, with vomiting and diarrhœa, also some pain in her bowels; about the same time her face began to swell and she had headache and high fever, which lasted about one week; after that she was able to be up and do her own work, but still felt bad until Jan. 5th, when she complained of being sore all over and having some headache.

Jan. 9th, when I first saw her I found her temperature 101°; pulse 120, slight cough; no expectoration; breathing short and quick, as if it hurt her to take a long breath; she was lying flat on her back with her limbs extended, arms crossed on her body, jaws set so that she could not open her mouth; said she could not swallow anything but milk and water; felt sore all over, every muscle in her body seemed to hurt her if she moved; pressure on any part of her body or any set of muscles would give her intense pain; face slightly swollen, some œdema of lower extremities; no appetite; bowels constipated, but slept well.

On further questioning, I discovered that on or about Dec. 12, J. had bought some hogs from his brother-in-law, J. R.; these he killed and made sausage of; his wife ate some of the raw sausage at the time, but says that it was only a small amount, and was for the purpose of finding whether it had enough seasoning in it.

I did not make a diagnosis on that visit, but took a portion of the sausage home with me, also a piece from each ham and made a careful microscopical examination of it. I was able to find trichinæ in large numbers in it. I then sent some of the pork to Dr. Melvin, Gov. inspector at Chicago, and he cornfimed my diagnosis.

My attention was then called to one of their children, a boy about two years old, who they said had been sick some time before with diarrhœa and vomiting, then took cold.

On examination I found the boy thin and emaciated, no appetite, a cough, dullness over the lower part of the left lung and with some coarse mucous râles over the other lung. He was cross and whinned most of the time; would cry if touched; his face was somewhat bloated; lower limbs pitted on pressure; had no appetite;

bowels constipated; temperature normal; pulse 110; slept poorly.

J. said that before his wife took sick he had a sick spell, which lasted about one week; he was taken with vomiting and diarrhœa and he felt like he had rheumatism all over; had no cough and a good appetite after he got over the first sick spell.

At my first visit I noticed his face was bloated and that he talked hoarse; he said he felt tired and had some headache, but was able to be around and look after his stock and do some light work. He was a hard drinker and was more or less under the influence of liquor all of the time.

He at first claimed that it was not trichina and would not give any information concerning himself.

Two days later I made my next visit and found the woman much better, with less pain, could open her mouth about one half inch, could move her arms slightly, but had not slept well the night before; had taken milk freely but could not swallow solid food; cough about the same; temperature 101°; pulse 110; bowels had moved from the effects of a dose of senna-tea; she still lay on her back and could not move without its hurting her. The boy was about the same in all respects.

J. said there was a man at the next house who wanted to see me; before going to see him I made inquiry and found that J. had given him some of the sausage. When I called to see him he said he had eaten some of the sausage but it had been cooked in a skillet; but the people with whom he lived said he had eaten some of it raw. He had no vomiting or diarrhœa at any time, only a slight headache and thought it only a cold. His face and whole body was slightly swollen; could not sleep well nights; sweat most of the time, and large drops of perspiration formed on his forehead and nose while I was there. He felt better in the morning and worse at night; said he could not breathe well at night and his feet swelled more then; had a bad cough which sounded hoarse and brassy; no pain in the lungs but some mucous râles over both of them; sore in all muscles, painful to move and would sit in a chair by the fire all the time complaining he would be too cold if he moved away from it; his temperature was normal; pulse 90; bowels constipated; appetite poor.

My next visit was Jan. 15th. The woman had not slept well since I last saw her; sweat all of the time; had pains in her breasts; coughed continuously; had a profuse white expectoration; had difficulty in breathing and felt all the time as if she would choke, and her throat pained her very much. I was unable to make a thorough examination of her throat as her mouth could be forced open but a little; her throat looked red but not swollen.

The soreness in the muscles seemed better, except in the right leg, which pained her more than it had at any time; could use her hands better, but at times would have cramps in her fingers which lasted only a short time; pressure over the joints hurt her as much as pressure on the muscles. The tongue was slightly coated; temperature 103°; pulse 150; respiration 35; bowels had not moved from the oil given the day before; she lay on her back; appetite poor.

The next day she seemed about the same excepting the choking sensation in the throat which made her breath hard, somewhat like a child with the croup; she coughed continuously and frequently expectorated large quantities of mucus.

About eight o'clock she went to sleep and slept two hours, then awoke with a hard fit of coughing and had much difficulty in breathing, but felt easier after a time; then called all her friends around her and said she was going to die; soon she fell into a restless sleep and awoke in about an hour; had a hard fit of coughing and then died. She was not delirious any of the time she was sick.

Jan. 19th. The boy's temperature was 100°; pulse 110; had slept but still had sweats; would sit on the floor and once in a while would play with the other children; drank milk freely and ate some potato; cough was less and dullness over his lung was not so marked; slight pressure on muscles would not produce pain; lower limbs still swollen; diarrhœa lasted but one day.

The neighbor, J. A., was not so sore in his muscles; had been able to walk to the front of the house, but said it made him very tired. His cough was about the same as at my last visit; had mucous râles over the lungs; his bowels moved every other day; appetite was somewhat better; rested well all night; his clothing was wet with perspiration when he awoke in the morning; temperature normal; pulse 90; limbs still pitted on pressure.

Jan. 22d. I was called to see K. E., a sister of J's. wife; she claimed all the time her sister was not suffering from trichinosis, and to prove it to her friends ate a piece of raw sausage in their presence the day before her sister died. At the time of my first visit she complained of a headache, vomiting and diarrhœa; temperature 102½°; pulse 120; face swollen, especially around the eyes; had no cough; no œdema of extremities; no pain in the muscles, but a poor appetite.

Jan. 24th. The girl, K., has slept well since my last visit; temperature 100°; pulse 90; had no headache; face still swollen, but not so much as before; perspired about the mouth and nose; lower limbs pitted on very slight pressure; her bowels had moved about three times that day.

Her brother E. had eaten some of the sausage on the 14th, but had been well until the 26th, when he was suddenly taken sick while at work with diarrhœa and became so weak he could not continue his work; he did not vomit at any time but felt an inclination to do so all the time. When I next saw him he still had the diarrhœa and his face was still swollen and puffed about the eyes; his brother said his face had been swollen for several days; temperature 99½°; pulse 100; no appetite; no cough; no pain in limbs and slept well at night.

Jan. 31st. E. felt much worse; face, neck and arms swollen; hands would pit on pressure; hurt his neck to move his head; temperature 103°; pulse 110; tongue coated; back and headache; complained of being cold all of the time, although he had on a heavy coat all the time and was sitting near the fire; his bowels had not moved for 24 hours although he had taken a tablespoon full of Epsom salts the night before; had not vomited but felt like it all of the time; made more urine than usual but of a very high red color; in fact all of them were troubled in the same way except the child who made very little for about a week.

The child's temperature was normal; pulse 90; eats well; sleeps as if in good health; no œdema, but still has pain from pressure on the limbs; his bowels move once a day.

K's temperature 99½°; pulse 90; eats and sleeps well; perspires some about the face and is somewhat troubled with night sweats; says she feels much better and was able to be moved to a neighbor's house.

Feb. 4th. K. feeling much better; temperature 99°; pulse 85; appetite good; sleeps well; some œdema of the face and limbs; able to do some light work but perspires freely at night.

E's temperature 101°; pulse 100; appetite better; and sleeps more; still complains of being cold and wears an overcoat about the house; bowels costive; face still swollen but not as much as it had been; a slight hacking cough and night sweats. Little boy's temperature normal; eats more and sleeps better; no cough; some diarrhœa; at times œdema of the limbs; looks thin and pale.

A's temperature normal; appetite and sleep improved; no cough; slight œdema of the extremities; night sweats but none during the day.

Feb. 10th. K's temperature 99°; pulse 85; eats and sleeps well; bowels costive; no cough; limbs pitted on pressure; is able to do house work; no soreness of the muscles but tires very easily.

E's temperature 99½°; pulse 90; sleeps very well, perspires most of the time; slight cough; feels a little stiff in the muscles and short of breath if exercises, but is able to be out of doors on pleasant days; bowels costive.

Little boy still improving, with occasional diarrhœa.

J. A's temperature normal; eats and sleeps well; no cough; no soreness of muscles; no sweats, except when exercising, and is able to go to town five miles distance.

February 16th. All came to my office, a distance of nine miles. Temperature normal. To all appearances they all looked well except E. and K., whose face pitted on pressure; appetite good; did slight work out of doors most of the day.

From that time they came to the office every five days. The œdema decreased and appetite and strength improved so that by March 1st. the men were all able to do hard farm work and to all appearances were well.

The treatment I used was 5 gr. of calomel every morning and a tablespoonful of Epsom salts at night for three days, which kept the bowels moving about three times a day. After that I gave Hall sol. of strychnine and pepsin, so they would get $\frac{1}{20}$ gr. of strychnine with 10 gr. pepsin. If they coughed any I gave them a mixture of carb. ammonia and paregoric. For the first two weeks all took liberal doses of whiskey and wine, after that drank it about three times a day. At first the diet consisted of milk and eggs, and as they improved they were allowed to eat whatever they liked.

The hogs were of the Poland China breed; were raised on a farm in a large pasture; they were fed on corn; no house slop ever being used; in the pasture was a corn crib and a cow shed which at one time was infested with rats. The two that were killed were picked out as the fattest and best meat hogs on the place; they were about 18 months old.

SOCIETY REPORTS.

THE CLINICAL SOCIETY OF LOUISVILLE.

Stated Meeting, May 2nd, 1893.

The President, Dr. I. N. Bloom, in the Chair.

MENINGOCELE—OPERATION.

Dr. W. O. Roberts: I have here a child six months old whom I saw for the first time last week. I was called to remove what was thought to be a sebaceous tumor of the scalp. Upon examining it closely I was pretty certain it was a meningocele, and the aspirator confirmed the diagnosis—the fluid drawn off was as clear as spring water and measured six drachms. The tumor is located just back of the posterior fontanelle.

This is the third case of meningocele that has come under my observation. The first was a patient of Dr. Cottell's; the meningocele was situated at the union of the two halves of the frontal bone. Union had taken place in the bone and the meningocele was shut off from the interior of the cranium. The tumor has split open, and dissected and the child got well without any trouble.

The next case was a child four weeks old that had a meningocele as large as a hen's egg at the posterior portion of the skull, between the two halves of the occipital bone. When the child cried the tumor became quite tense; I advised its removal. The patient was brought to me by Dr. Milner, from Breckinridge County (Ky.) I made an elliptical incision over it and dissected the tumor out thoroughly, then transfixed its neck with a double thread and removed it. There was an opening between the bones fully one-quarter to one-half inch in width. I expected of course that this operation would be followed by a recurrence of the growth or by hydrocephalus, as is frequently the case, but I am glad to say the child made a good recovery. It has been a little over three years since the operation was performed, and the doctor writes me that the child is as sensible as most children of that age.

DISCUSSION.

Dr. I. N. Bloom: I would like to ask Dr. Roberts what he expects to do with the case presented to-night.

Dr. W. O. Roberts: I shall aspirate it for a while but if it continues to refill I will remove the sac. I would like to know if any of the gentlemen present have ever operated upon a meningocele.

Dr. I. N. Bloom: I have read of cases being operated upon abroad even where there was a portion of the brain protruding, with very good results.

MEASLES AND SCARLET FEVER.

Dr. P. Gunterman: There is quite an endemic of measles and scarlet fever in my neighborhood. About twelve weeks ago I was called to see a child nine months old which had been sick two or three days; I found it with distinct scarlet rash and with all the evidences of scarlet fever. I treated it for such and in the course of five or six days it was doing very nicely.

On my visit the next day, I found the child extremely ill, and broken out with rubeola thickly and thoroughly; this went through its regular course and in the course of ten or twelve days the patient seemed to be getting well; about two or three days after that it showed some evidences of fever again and became thoroughly anasarcous, which to my mind indicates that the child had scarlet fever to begin with. I believe this is the first case of scarlet fever I have ever seen followed so directly by measles. Since then I have treated a family, and am treating them now, five children, one of them has had scarlet fever and had measles when a baby, so I am told by the mother. The oldest, a girl about ten years of age was taken ill with vomiting, headache, etc. and the second day broke out with a scarlet rash. She went through the regular course without an untoward symptom and in ten days was quite convalescent. Then the next a girl of eight years was taken ill with vomiting, purging, quite a high fever, and on the second day had quite a distinct scarlet rash. On the fifth day after breaking out with scarlet fever, she developed a distinct case of measles. The other two children, girl five and boy two years of age, had all the symptoms of scarlet fever with distinct rash, followed in four or five days by the eruption of measles. This makes six cases of the kind I have seen, and I wish to know whether it is a common thing. With me it is certainly very unusual. I might also say that the oldest girl who did not develop measles had this disease when a baby.

DISCUSSION.

Dr. J. W. Irwin: I do not know that I have ever seen anything of the kind in my experience. I simply want to make one statement, that I have never had a death from measles in my practice. I have seen a great many cases, some very severe ones, followed by the usual complications, but in every instance recovery has resulted.

Dr. Wm. Bailey: It is not a very common occurrence, and yet it is very evident by these cases that two specific causes may be operating at the same time. Evidently the poisons were introduced very nearly at the same time, as is shown very clearly by the day on which the eruption took place in the cases referred to by Dr. Gunterman. However, the children would have had fever nearly the whole time anyhow from measles, as measles come out the fourth or fifth day. I believe the average is the fourth day for the eruption from measles, and the second day for the rash of scarlet fever. The first case spoken of shows clearly that it was a case of scarlet fever, as we do not have anasarca so frequently following measles as we do scarlet fever. It is true that we have at the beginning of some of the eruptive diseases an eruption that simulates scarlet fever, but the history of this case shows that it was a case of genuine scarlet fever. Then in the second family, Dr. Gunterman reports a case of scarlet fever which was not accompanied by measles, because protected by a previous attack, which I think goes to show that the others were clearly scarlet fever and measles combined and we know that one of these does not protect us against the other. Sometimes one eruptive disease seems to be held in check by the prevalence of another, in which the first runs through its course and somewhat delays the second. The cases are very interesting to me; I did not know that scarlet fever was prevalent to any extent in the city. I have seen a good many cases of measles, particularly in certain localities.

Dr. Irwin has been very fortunate not to have had a death from measles or any of its complications. I saw a great many deaths from catarrhal pneumonia during measles during the war.

Dr. W. O. Roberts: I would like to make continued report of a case. At the last meeting of this society I reported a case upon which I had performed an epicystotomy for the removal of two pieces of catheter from the bladder. The gentleman went home soon afterward, and I now learn that the wound has entirely healed and he is passing urine the natural way.

SARCOMA—OPERATION.

Dr. A. M. Vance: Two months ago a lady was brought to me from New Hope, Ky., forty-six years of age, who had a tumor just back of the right ear of twenty years growth. The tumor had never been the source of any trouble until two weeks before she came to Louisville, when she suffered some intermittent pain, with considerable increase in size of growth. Upon examination I took it to be an ordinary sebaceous cyst, having taken on fermentative action, and thought its removal would be very simple. I injected some cocaine and made an incision; as soon as I reached the body of the tumor I recognized my mistake from the immense vascularity of the growth, and the fact that it was semi-solid in nature. I immediately put the patient under chloroform and removed the growth; found that it was sub-periosteal, the skull over an area as large as a silver dollar had melted away, the base of the tumor being composed of loose fragments of bone which seemed to have become adherent to the growth, not resembling skull at all but patches of bone. I cleaned it out as thoroughly as I could, the operation being accompanied by terrific hemorrhage, packed the cavity and left it packed with iodoform gauze; then removed it and allowed the wound to contract together and heal up. At the operation I thought the growth was probably sarcomatous in character, which the microscope has proven it to be. At the end of six weeks she returned, the growth had recurred and was double its former size. I attempted a second removal with better preparations than before, and succeeded in getting away the tumor so far as the external part of it was concerned on a plane with the skull. I found the opening in the skull was considerably larger than at the former operation, and the hemorrhage was very much greater; it was absolutely uncontrollable, and the woman came very near dying from the shock, or from chloroform and shock combined with hemorrhage, while on the table. I packed the wound to stop the hemorrhage, packing removed at the end of forty-eight hours the same as was done at the former operation. I only removed part of the growth because the patient became so completely exsanguinated before completing the operation that it would have been impossible to proceed farther. I removed all that portion of the growth which was extra-cranial, but, as part of it was intra-cranial, I did not think further operation justifiable, especially considering the extreme condition of the patient at the time.

DISCUSSION.

Dr. I. N. Bloom: Had Dr. Vance known the exact condition which he would have encountered when the patient first came to him, I would like to ask if he would have operated?

Dr. A. M. Vance: Yes I think I would; there was really nothing else to do.

Dr. W. O. Roberts: I think this must have been either a fibroma or enchondroma originally which became converted into a sarcoma. I have only seen one case of sarcoma affecting the bone of the skull. That was in a negro man twenty-six years of age. The growth occurred on the side of the skull involving the parietal bone. I removed it and removed a portion of the parietal bone much larger than a silver dollar. In this case (the same as in the one mentioned by Dr. Vance) the hemorrhage was excessive. This patient left the city some time after the operation and I never heard of him again.

TUMOR OF MESENTERY.

Dr. Roberts (continued): I would like to report one case: About three months ago a man came to me suffering intense pain in the abdomen; I could detect no growth until about six weeks ago, then I detected a movable growth a little above the umbilicus and to the left of the median line. I suggested to him the advisability of a laparotomy, hoping that the growth was located in the great omentum, and that I would be able to remove it. After several days he consented to the operation; meantime he had been confined to his bed and had wasted considerably. I operated at Norton Infirmary. Made a very free opening, and found the growth as large as a goose egg and situated in the mesentery. I decided not to attempt its removal and closed the abdominal wound. He recovered from the effects of the operation without an untoward symptom and since then has steadily improved in general condition. He was in the office day before yesterday and looked like a new man. He says he suffers no pain whatever in the tumor, and it seems to me the growth is reduced to at least one-half its original size.

DISCUSSION.

Dr. W. H. Wathen: Were there any adhesions, and what was the character of the growth?

Dr. W. O. Roberts: I took it to be a malignant growth, the patient had complained of pain for about eight months. There was no history of syphilis, nor of tubercular disease.

Dr. W. H. Wathen: We cannot say what will be the final result of this case because no one can form an opinion so accurate as to the character of this growth as Dr. Roberts who had an opportunity of examining it; but there is a peculiarity about various conditions in the abdomen, particularly about troubles of the liver, gall duct, and the gall bladder, where operations are performed for troubles that have caused a great deal of suffering, loss of flesh, etc., and where compartively nothing was done except possibly the separation of a few adhesions, but the patient improved very rapidly for a time. I cannot explain the growth Dr. Roberts describes in any other way than to consider it malignant, and while the patient has improved, I am inclined to the opinion that after a while there will probably be a recurrence of the old symptoms, then continued progress of the disease, and the man will die of malignant trouble. The case is one of great interest, and I hope Dr. Roberts will watch the future progress of it and report results at a subsequent meeting.

Dr. A. M. Vance: I would like to ask Dr. Roberts why he did not remove the growth?

Dr. Roberts: There was a large tumor in the mesentery and very vascular, and I was afraid of too much hemorrhage.

CHRONIC DIARRHŒA; INSOMNIA; ATTEMPTED RELIEF BY HYPNOTISM; ERYTHEMA NODOSUM.

Dr. J. W. Irwin: The first case to which I wish to call your attention is not unique in any way, but one the general practitioner is often brought in contact with and one that serves to show what a long continued drain on the system may give rise to. About a year ago, I was called to see a lady suffering from chronic diarrhœa; she gave the history of having had the disease for five years previously. Her abdomen was immensely swollen and tympanitic from the presence of gas, and every particle of food that she took passed through the bowels fermented, causing great distress. There was a great deal of rumbling in the bowels and her general health was very feeble. There was no perceptible tenderness anywhere and no tumors and no undue enlargement of any of the internal organs. The character of the discharges was as we always see in these chronic cases, light brown in color, showing the absence of bile. The discharges were examined, but did not respond to the test for bile. This patient, after a great deal of care and perseverance, was relieved from the diarrhœa, but her general health did not improve afterward. She remained in a delicate condition and had loss of appetite amounting to general anorexia for quite a while after the diarrhœa had ceased to trouble her.

I was called again to see this patient about two months ago; she had then been for some time under the care of one of those unique physicians known as a "Hypnotizer." She gave an excuse for not having called on my services sooner as some one had persuaded her that the hypnotizer was just the man for her case. She had been suffering from insomnia, and the physician undertook to put her to sleep by means of hypnotism. Of course I was curious to know the methods he employed, and learned about the following from her husband: The hypnotizer began by saying "Madam you cannot go to sleep and I have given you everything I know of to make you sleep; I know of but one more thing that can be used and that is hypnotism, the doctors are practicing it for various conditions in Germany with most satisfactory results, and I wish in this case to practice it upon you." "You go to bed," she did so and the doctor admonished the husband that he must not come into the room. The hypnotizer placed two chairs near the side of the bed, one at the head, the other near the foot, and he sat down upon one and put his feet upon the other, after first removing his coat and shoes. He then told the patient to watch him and not to take her eyes away until she fell asleep. She said that she watched him and watched him until she was tired and blind, but could not go to sleep. She believed that one very disturbing element was the close proximity of his feet to her face. After persevering in this treatment for an hour the doctor gave it up and informed her husband that he could not hypnotize her.

This same patient was taken about a month ago with pain in the ankles, knees and hip joints of a rheumatic character, but there was no swelling about the joints. There was at first a little fever, the extremities were unduly hot to the touch and exceedingly sensitive, so much so that a blanket caused a great deal of pain over her limbs. A week or so later, spots appeared on her ankles, legs and thighs; they were four or five inches apart, some of them as large as a half dollar of a reddish purple color in the center, very slightly elevated above the skin, indurated in the center but not around the margin. No fluctuation could be detected and no suppuration seemed to be present in any of these spots. Two of the spots coalesced and by some means this spot became chafed and ulceration followed. Now the spot has become enlarged to about the size of the palm of the hand and it is studded over with granulations which bleed upon slightest pressure and which are exceedingly painful. The spots on the other leg, and some of them on the same leg, are disappearing, but this spot of ulceration does not seem to heal nor does it seem to enlarge; it remains in a sluggish condition. The treatment of this patient has been in the line of tonics and stimulants, but she has not improved in health; pain is still present in the limbs; the spots remain out for five or six days, disappear and then reappear. The disease answers the description of acute erythema nodosum but does not seem to yield to treatment.

FATAL CASE OF TYPHOID FEVER.

The next case I wish to speak of is one in which we are all interested, a case of typhoid fever. Four weeks ago I was called to see a gentleman in this city suffering from a very violent attack of gastric colic, the pain seeming to be confined to his stomach. He was doubled up on a couch trying to vomit but could not eject anything. He had taken some food that day and for a few days before had neither vomited nor purged. I relieved him with hypodermatic injections of morphine. Some fever followed the temperature running up to 103° F., which lasted two or three days; and from that time on it was continuous but did not go above 102° F. for a week. The temperature fell in the morning to 109° F. and in the evening to 101½°F.; a few days later it fell to 97½° F. to 100° F. for ten days. There was no pain anywhere, no headache, no aching in any part of the body, no chilly sensations and nothing to apprehend the approach of trouble. The patient had, on the seventh day after he was taken with this violent attack of colic, the peculiar eruption characteristic of typhoid fever on his breast and upper part of the abdomen; a few spots appeared, lasting four or five days. There was very mild diarrhœa, he had from two to three movements of the bowels daily, although he was fed on milk and peptonoids yet digestion seemed to be very defective. One particular feature of this case attracted my attention, and that is why I report the case. From the very onset of the disease the patient had a dry tongue, so exceedingly dry that he could not articulate until his tongue had been soaked in water and softened. The tongue had become very much swollen. He had not taken any calomel before I saw him and I gave him none afterward. The tongue was swollen and was fully three fourths of an inch in thickness, cracked and furrowed, mouth and throat dry, no secretion in the buccal cavity at all, pulse did not exceed, after the first three days, 85 to the minute. This condition lasted until the twenty-second day of the disease. On the morning of the twenty-second he was slightly delirious, talked a little incoherently; he had been sleeping regularly and sufficiently. On the afternoon of the twenty-second day, at four o'clock, he seemed to be considerably revived, his languid condition of the morning seemed to have passed away. I saw him again at eight o'clock in the evening, and his temperature had gone up to 103° F. I gave this patient stimulants by the stomach from the end of the first week and they seemed to have no more effect upon him than so much water. That is to say, there was no increase in the strength of the heart's action. I gave him 6, 8 or 10 ounces of whiskey daily. At eight o'clock that evening he was quite tympanitic, but up to that time there had been no tympanites, abdomen perfectly flat, very little tenderness under pressure and that only in one spot near the right iliac fossa. On this occasion (at eight o'clock) he was in an unconscious condition. Whiskey was given by the mouth and by the bowel, atropia, nitro glycerine, and digatalis injected hypodermically and no effect from any of the drugs could be observed. He died at 2 A. M.

This case illustrates to me a class of cases of which I saw several, some years ago, when the disease was prevalent in Evansville, Ind., in which I thought the infection was traceable to a barge of corn that had sunk in the river. Upon that occasion I saw a great many cases of dry tongue, but none so striking and none that seemed to be so persistent as this one. In the case reported, there were no evidences of perforation of the bowel further than the tympanites; had this man had hemorrhages or pain in the bowels I might have thought perforation had taken place. This case is the first one I have ever seen where the free use of stimulants appeared to have no effect upon the heart's action so long before the fatal issue occurred. There are two other cases of the disease in the same house now, one has been sick for five days, the other nine days. Dr. Bailey saw the first patient referred to shortly before death occurred; the question of milk supply was considered and Dr. Bailey suggested that a certain dairyman had been selling milk to people who took the disease, that a great many cases in other families were attributed to this cause, they were taking milk from the same dairyman. The hygenic surroundings in this case were good, and it is very hard to say how infection occurred.

DISCUSSION.

Dr. I. N. Bloom: In regard to the first case reported by Dr. Irwin: From the description given, I should consider the case one of purpura. Purpuric spots vary in size from a small petechia up to almost any size. It looks very much like purpura rheumatica gangrænosa. It is well known that purpura rheumatica or purpura hemorrhagica will often go on to gangrænosa; in fact the sharp distinction between purpura hemorrhagica and milder scorbutus cannot be made. From the history of the case, description of the exanthem, its obstinate tendency etc. would be against erythema nodosum as this disease rarely ulcerates, and is a trouble of comparatively a few days standing. It is peculiar in its lumpiness, lumps varying in size and very decidedly elevated. It is never of the color described by Dr. Irwin; as a rule it varies from a fairly dark red to very light red spots, usually painful. From the general description given I should consider it a case of purpura; certainly the only forms of erythema that would suggest themselves would be erythema multiforma and erythema nodosum, except that the spots would be depressed in the center rather than elevated.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting May 26th, 1893.

The President, Dr. F. C. Simpson, in the Chair.

TRAUMATIC ANEURISM.

Dr. Turner Anderson: This young man about two years ago was handling a bar of iron when a piece was detached and penetrated his thigh. He was seen soon afterward by his physician; was little inconvenienced at the time, but soon noticed that there was a tumor on the inner side at about the middle third of the thigh which has continued to enlarge. It is plainly a case of traumatic aneurism.

DISCUSSION.

Dr. A. M. Cartilage: It is certainly a very pretty illustration of traumatic aneurism. I would like to say that I think the best treatment for this condition is direct dissection, after tying above and below the point. I had occasion, some months ago, to see a very large traumatic aneurism in this locality, perhaps a little lower, developing fourteen years after a shot wound with a 22 caliber bullet. It was an enormous aneurism occuring in the practice of Dr. Chenoweth who operated upon it, making a direct dissection

The patient was a negro woman; she made an uninterrupted recovery and is perfectly well to-day.

Dr. W. L. Rodman: I fully agree with what Dr. Cartledge says. It is evidently a circumscribed traumatic aneurism, and the treatment he suggests is the only treatment to be thought of.

Dr. A. M Vance: I agree perfectly with what the two gentlemen have said.

Dr. F. C. Wilson: The diagnosis in this case is a very easy one. The thrill is very distinct, the expansive impulse plainly felt, and the bruit can be very readily heard. There is no question as to the vessel involved (the femoral) and no doubt the treatment suggested by the surgeons is the one to be adoped. Of course, the case naturally falls into the hands of the surgeon after the diagnosis has been made by the attending physician.

Dr. E. R. Palmer: The aneurism is splendidly located for collateral circulation, and I think the operation ought not to lay the man up for more than a few days. Collateral circulation would be established without any trouble whatever.

Dr. W. L. Rodman: I would say, in answer to Dr. Palmer's question, that the plan of digital compression was very largely followed at one time with excellent results in many cases. This treatment, however, is more particularly applicable to idiopathic rather than traumatic aneurism. Then you have compression by means of different instruments, Reid's method or compression by Esmarch's bandage for instance, which is probably the best of all. In the traumatic variety I think the open treatment, dissecting out the aneurismal sac, is undoubtedly the best.

CHOLECYSTOTOMY—RECOVERY.

Dr. A. M. Cartledge: These specimens I removed twelve days ago to-day from a patient thirty-four years of age, female. Six weeks ago the patient, a robust healthy subject, never having suffered from anything, was taken with what was supposed to be a case of ordinary colic. Her physician was summoned and, after an examination, he concluded that it was a case of indigestion and gave her a hypodermic injection of morphia which relieved her. The following day was spent in comparative comfort, the patient going about attending to her household duties. On the following night there was a return of the pain which she referred particularly to the epigastric region; the trouble was supposed to be with the stomach, and some common place remedies, catartics, etc. were administered, but without any special relief. In four or five days, however, her physician noticed a small tumor situated a little to the right of the stomach in the region of the gall bladder, concluded that the trouble was in the gall bladder itself, and was due to obstruction of the cystic duct. There was slight jaundice. The tumor, when first noticed, was very small, and continued to enlarge gradually. She had several attacks of pain and, some two weeks afterward, the pain passed away but the tumor remained enlarging all the time. I saw the patient about this time and agreed with the physician that it was a case of distended gall bladder owing to obstruction of the cystic duct.

Twelve days ago she was subjected to an exploratory incision; the gall bladder was found very tense; there were some slight adhesions of a very friable character to the surrounding structures which we easily separated by the fingers; the gall bladder was opened and contents found to be mucus (not bile) and in the cystic duct were found the specimens I present. There were twenty-three calculi in all, five large and eighteen small ones. They were carefully removed and the gall bladder stitched to the abdominal wall and peritoneum, excluding skin. In the case of cholecystotomy which I reported to this society some months ago, I stitched the gall-bladder, carrying the sutures through the skin, muscular coat, and pareital peritoneum. This case did uninterruptedly well, but at the same time there was some little drawing sensation which I thought could be easily avoided by leaving the skin out of the deep sutures. The subsequent course of the case reported to-night was without an accident; there was no pain, no elevation of temperature and not a drop of pus. The wound has closed with the exception of a very small fistula and the patient is up and went down to dinner to-day, (twelfth day after the operation). What I wanted to call special attention to was the manner of stitching the gall-bladder, not carrying the stitches beneath the skin. I think this method is of great advantage, because when the stitches are carried through the skin it usually gives rise to stitch abscess and pain.

Drs. Vance, Chenoweth, and Scott assisted in the operation.

DISCUSSION.

Dr. A. M. Vance: I saw the patient referred to in consultation with Drs. Cartledge and Scott, and feel that Dr. Cartledge ought to be congratulated upon the rapid and excellent result obtained. I think the question in these cases in the mind of the surgeon is whether he has removed all the calculi or not. I feel sure that they were all gotten out in this case, though for three or four days there was no discharge of bile. I think this is occasioned by the fact that there is infiltration about the duct or irritation due to a certain amount of injury, done in the effort to remove the stone from the duct, which causes obstruction temporarily. Even if bile does not flow for four or five days it is no evidence that the obstruction has not been relieved.

The case reported is certainly an illustration of the good that may be done by cholecystotomy.

THE INFLUENCE OF CHLOROFORM UPON THE COURSE OF NORMAL LABOR, AS SHOWN BY THE TACHADYNEMOMETER.

Donhoff (*Archiv. fur Gynakologie,*) administered chloroform in various degrees to five cases of normal labor, and noticed its influence upon the expulsive force of the uterus and abdominal muscles, as shown by a carefully constructed physiological apparatus. The conclusions reached are in substance the following:

1. The administration of chloroform, even in diminutive doses, exercises a retarding influence upon the progress of labor. The muscular pressure sinks to one-half of the amount of that present before the administration of the anæsthetic. In eight observations the average figures were 1837.
2. The expulsive force of the uterine contractions steadily diminishes during the exhibition of chloroform.
3. The labor pains, besides being weaker, are also more irregular during slight anæsthesia. During deep anæsthesia the intervals between the pains are longer and all the pains are diminished in strength.
4. The pains increase immediately after discontinuing the anæsthetic. The expulsive force of the contractions after stopping the chloroform, compared with the force just before its administration, is, as expressed in figures, 2–3.
5. The labor pains generally continue diminished in power for some time after discontinuing the chloroform. In one case they had resumed their normal intensity in ten minutes, while in two other cases two hours had expired.
6. If the action of the abdominal muscles is only slight, this action is checked entirely by a superficial anæsthesia, but soon reappears after the stopping of the chloroform.
7. The action of the abdominal muscles continues, but in diminished force, during superficial anæsthesia, if before the exhibition of the chloroform it was vigorous in character.
8. Deep anæsthesia abolishes entirely the action of the voluntary muscles.
9. The intervals between the pains become longer immediately after chloroform is administered, and the labor pains, besides being less intense, decrease in numbers about twenty-five per cent.

These carefully conducted experiments show that chloroform, no matter in what degree it is administered, exercises a retarding influence upon the progress of labor. The expulsive forces are lessened and there is no corresponding diminution of the resistance.—*Abstract.*

"Longings" of Pregnant Women.—From a study of over three hundred cases. Giles, of London Obstetrical Society, divides the healthy "longings" of pregnancy into three classes: those due to desire for something to check the sense of nausea, those which express the physiological desire for certain kinds of food, and those due in many cases to an auto-suggestion prompted by popular belief. The frequency of longing decreases as the number of conceptions increases.

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SATURDAY, AUGUST 12TH, 1893.

EDITORIAL.

TRICHINOSIS AND MEAT INSPECTION.

Elsewhere in this issue appears the clinical history of five cases of trichinosis as recounted by Dr. Wilcox. It is the same old story: The mother eats some raw sausage to see if it is properly seasoned; the family eats the sausage but half cooked; several are taken ill; one dies; the physician diagnoses trichinosis ; to prove the doctor wrong a relative, with more confidence than wisdom, eats of the sausage and proves the doctor right. The whole picture is another demonstration of the necessity for careful attention to food and food-stuffs, with the emphasis placed upon animal foods.

All meats should be inspected carefully and conscientiously before being used for food. Moreover meats, and especially pork, must be thoroughly cooked before eating; thorough cooking, meaning the application of heat to such degree and for such length of time, as will insure the destruction of living organisms.

Some foreign countries having learned that trichinosis is spread by means of pork, will not allow that article to be placed upon the market until it has passed satisfactorily a thorough examination by the microscope. Americans were rather surprised when the American hog was excluded from these markets, and, as it was a question affecting the pocket, forthwith instituted a government inspection of pork and intrusted the work to the Bureau of Animal Industry of the Federal Agricultural Department. This bureau to prove the practicability of government inspection has, since about two years, examined all pork exported, and with the astounding discovery that while only about 1 pro 1000 of European hogs are infected by Trichinæ, *two per cent. of American hogs are infested by this parasite.*

The bureau inspect pork for home consumption as well as that for export. Not at all! It has not money sufficient so to do. The department is dependent upon Congress for means to carry on its work, and it would seem that, inasmuch as American citizens only are infested and no advantages are to be gained politically by inspection of pork for home consumption, our busy legislators cannot see their way clear to divert from other channels any monies for this purpose.

Ex-secretary Rusk was severely criticized for expending public funds for pork inspections, and his successor has announced himself opposed to the entire system of meat inspection. It would be pusillanimous to condemn Secretary Rusk's action in this matter or to raise a great cry that the general public has been taxed to pay for the protection of aliens. Undoubtedly it would be wrong to use for a long series of years public funds for such purpose. Probably ex-Secretary Rusk, and as well Dr. Salmon, Chief of the Bureau, would agree with Secretary Morton that the expense of the meat inspection should be borne by the exporters. But, as foreign governments would not accept certificates of inspection from exporting houses, it was wise and prudent in the Agricultural Department to take up the matter and demonstrate that pork officially inspected would be admitted to foreign markets. This has been done and it is a just and righteous attitude now taken by Secretary Morton, that exporting firms should bear the expense of the inspection.

But why should not pork for home consumption likewise be inspected officially? If to protect the lives of Germans, Austrians, Frenchmen or Italians, their governments found it necessary to close the market to uninspected American pork, why should not Americans be granted the same amount of protection? Why should they not be protected against "measley" pork as well as tuberculous beef. This country seems far behind European nations so far as concerns the inspection and regulation of food products.

Medicine is becoming the science of the prevention of disease rather than the art of curing it, and to further this end medical scientists must join with scientists in other lines, and insist upon the inspection of all food meats at the time of slaughtering for the market. Food inspection, to be effective in this country, must be enforced by the Federal Government and be performed by competent scientific men, unbiased and undeterred by any political considerations whatsoever. That this would be difficult under the existing system is unfortunately illustrated by the present administration, in that the Secretary of Agriculture seems to be out of sympathy with the purposes for which the Department was established. He avows his belief that it is not within the functions of Government to carry on scientific investigations, and that it might be a good idea to close up the Department.

Varicose Ulcers.

Dr. Reboul (*La Semaine Médicale*), treats various ulcers by cleansing, antisepsis and occulsion of the ulcer. He first applies gauze moistened with Van Swieten's solution, or a solution of the biniodide or cyanide of mercury, and covered with oiled silk. After four or five days of this treatment he finds the surface of the ulcer sufficiently modified and covered with granulations to proceed to the use of dry antiseptics. The ulcer is then filled with powdered salol or iodoform and over this salolized or iodoformized gauze is placed, then oiled silk and a tarlatan bandage, reaching from the ankle to the knee. This dressing is not changed for fifteen to twenty days, when the ulcer is found to have healed over completely. If not a second, or possibly a third dressing may be requisite to complete the treatment. In cases where the infection is so ancient that mercurial solutions are insufficient to clean the ulcer, camphorated salol or camphorated naphthol may be necessary. He fills the cavity with gauze imbibed with these drugs and applies then an occlusive dressing.

THERE are two thousand female physicians in the United States, seventy in London, thirty-five in Paris, five in Edinburgh, two in Dublin, and one in Algiers.

BACTERIOLOGICAL NOTES.

Anthrax Bacilli in the Mud at the Bottom of a Well.

A very interesting and no less important communication has appeared (*Ann. de l'Inst. Pasteur*, March 1893), from the pen of Diatroptoff,on the discovery of anthrax bicilli in the bottom of a well. An epizootic of anthrax occured near Odessa on land where numerous flocks of sheep were pastured. The sheep which perished were buried and the live ones removed from the place. The sheds and pens were thoroughly disinfected and the sheep returned. Again certain of them were attacked with anthrax. A new change and further disinfection was followed by a third outbreak. The proprietor then observed that only the sheep which received water from a certain well (which had been abandoned in domestic use on account of the brackish taste of the water) were affected. The well was filled up and the disease ceased to appear. A bacteriological examination of the water in the well revealed the presence of no anthrax bacilli in either culture or inoculations. The author examined soil from the pen but with negative results. He then examined the mud in the bottom of the well where he found the anthrax bacilli. They were obtained in pure culture by inoculating rabbits and mice with the mud. They died in a short time and from their organs pure cultures were obtained.

The Dangers in Antiseptic Midwifery.

Schräder (*Centralblatt f. Gynäk*, No. 16, 1893) has called attention to the exceptions in the success of antiseptic obstetrical practice and endeavors to explain the cause, why the practice is not universally successful. He holds that the poison of puerperal endometritis is often actually diffused throughout the body by intra-uterine irrigations, thus causing a local and probably a harmless morbid condition to become the agent of deadly infection, the veins and lymphatics acting as the diffusers. The stimulation of the uterine muscular tissue by the injections increases the lymphatic absorption. Although vaginal injections are much safer, he believes that they frequently cause a general infection. The fact that a streptococcus has been found to be normally present in the vaginal secretions after labor by Doderlin is considered of importance. Schräder strongly condemns the use of caustics in puerperal ulcers. The reason for the rapid healing of a lacerated perineum when it is repaired immediately after labor is that the parts are allowed to rest. Glöckner's statistics are not favorable to prophylactic irrigation.

Diseases Probably Caused by Flies.

Surgeon General Sir Walter Moore (*British Medical Journal* 1893, p. 1154) calls attention to the danger of flies conveying disease germs. In a previous article he has brought out this point with reference to Asiatic cholera, but in this article he includes several other diseases such as Enteric fever, phthisis, anthrax and leprosy. This is especially important in places where no special care is exercised in the disinfection of excreta or of soiled clothing. Flies seize every opportunity to investigate all kinds of filth. They are constantly alighting upon all sores on faces, hands etc. whether healthy or affected with contagious diseases. That flies in the East cause "Peenash," or maggots in the nose both of man and animals, is not doubted. The occurrence of isolated cases of cholera and enteric fever and ophthalmia, he thinks may be explained by the conveyance of the germs of these diseases by flies. He suggests the importance of protection against these insects. [The suggestions are exceedingly good and when we consider the habits of flies and the opportunities which they have of taking up bacteria either in their food or on their feet and bringing them to some human food suitable to their development, there is much to support the "fly theory" and arguments against these troublesome insects.—Ed.]

Aluminum is to be used in the construction of artificial limbs, a use to which it seems to be particularly well-adapted, owing to its great strength and lightness.

ABSTRACTS.

PERINEPHRIC ABCESS—ENDING WITH PERINEAL LITHOTOMY.

H. I. JONES, M. D., L. R. C. P. E., Etc.

Perineal lithotomy is about the only operation in the whole range of surgery which is performed, as it were, in the dark.

In August, 1891, Sammy Jones, aged two years, was brought to my office, suffering from a swelling of the left lumbar region. On examination, his outward appearance led me to suppose that I had to deal with a case of hip-joint disease. In due time the swelling in the lumbar region became soft, I made a free incision which gave vent to a copious flow of laudable pus, the cavity was washed out with an antiseptic fluid, and a drainage tube inserted. Pus flowed out of the wound for about two months, when it stopped discharging, at which time the little fellow began complaining of pain in the region of the scrotum, telling his mother that a flea was biting him. At the same time she noticed that a good deal of pus was flowing per urethram accompanied by some stones which she could triturate between her fingers—no doubt phosphatic concretions. By this time all the hip-joint symptoms and gait had disappeared. Analysis of the urine showed renal casts, albumen and pus; no doubt the abscess had found its way into the bladder per left ureter. I believe that fifty per cent of the cases reported as cases of hip disease, and cured without lameness or deformity, never have been cases of hip disease at all, but cases of perityphlitis, perinephritis, periarthritis, and various neuroses of the hip and surroundings, all of which are insignificant as compared with true hip disease, which is chronic and slowly progressive.

The little fellow passed out of my hands owing to the long distance to bring him to my office. The next time I saw the little patient was October 27, 1882, when the mother brought him to my office, stating that he suffered excruciating pain during and after micturition. Suspecting a stone as being the cause of his trouble, under the influence of chloroform administered by my friend Dr. O. V. Thayer, I sounded the bladder and detected a large stone.

December 9th, assisted Dr. O. V. Thayer, I preformed the latral lithotomy and removed two calculi, which I now have the pleasure of exhibiting to you. When I first introduced my finger into the bladder, I felt a large ovoid shaped stone, and attached to it, as a tail to a kite, by a tenacious mucus, was the small stone. With some difficulty, after enlarging the wound, I extracted the foreign material, the bladder was irrigated with antiseptic fluid, but no drainage tube was inserted as I find children do better without one. On the fourth day urine passed per urethram; on the 10th day I noticed that all urine passed per urethram, and on the 14th day wound of operation was perfectly healed. He made a good recovery without any special symptom.

The points of special interest are the lumbar abscess, long duration of the case, and rapid repair of surgical wound. The question is this: Was the abscess due to pyelonephritis; was the nucleus of this stone the cause of the perinephric abscess? Pyelonephritis, nephritis, and renal colic, are preceded by nephritic colic, but owing to the age of the patient we could only get the objective symptoms, the abscess passing pus per urethram, etc. As above stated no doubt the abscess emptied itself per ureter into the bladder. The significance of acute lumbar abscesses depends upon the causation and the locality from which they take their origin. The majority of lumbar abscesses are caused by purulent affection of the kidney, or its pelvis, as for instance, renal calculus or pyelitis, but in a large number of cases no affection of the kidneys, or their adnex, can be recognized. Some injury of one or the other must be assumed as the cause. The presence of pus in the urine indicated pyelitis. Was it due to the nucleus of this stone now exhibited, or was the abscess primary in the tissue surrounding the kidney, and due to some injury?

Before closing, if I may be permitted, I will give a rapid anatomical sketch of the region in which these abscesses are developed, and the relation of the kidney to neighboring organs. As you are all aware, the kidneys are situated on each side of the vertebral column and surrounded by a large quantity of cellulo-adipose tissue. The fatty capsule of the kidney has relations posteriorly with the pillars of the diaphragm, and with the deep folds of the transverse aponeurosis; it also has relations anteriorly with the ascending or descending colon. The fatty capsule is continuous with layers of cellular tissue, which are continuous with the cellular tissue of all organs of the perinephric region. But the continuity most important to note is that which exists between the perinephric cellular tissue of the iliac fossa. The iliac aponeurosis is usually found only in the two upper thirds of the iliac fossa by loose cellular tissue, which is rarely continuous with fibrous tissue. From the disposition of parts it results that the pus surrounding the kidneys will find its way equally easily into the cellular tissue, which forms the immediate covering of the psoas muscle, or into the subperitoneal or sub-aponeurotic cellular tissue. This continuity of the cellular tissue of the perinephric region with that of the iliac fossa is the anatomical explanation of the facility with which perinephric abscesses follow the iliac and crural vessels, open into the triangle of scarpa or at the trochanter minor, following the psoas muscle to its lower insertion. Perinephric adipose tissue is continuous with the cellular tissue of the lumbar region beyond the quadratus lumborum between the margin of the latissinus dorsi and external oblique muscle. This continuity of the cellular tissue shows us the course taken by the pus in cases of perinephric abscess, when it is poured out into the sub-cutaneous cellular tissue of the lumbar region to be localized, as in the case before us. So this relation of the perinephic cellular tissue to the iliac fossa, true pelvis, colon, diaphragm, and psoas muscle, will enable us to understand the peregrination of these abscesses.—*Pacific Med. Journal.*

OVARIAN TUMOR WEIGHING ONE HUNDRED AND ELEVEN POUNDS REMOVED FROM A CHILD OF FIFTEEN, WHOSE WEIGHT WAS SIXTY-EIGHT POUNDS.

W. W. KEEN, M. D.

Miss B., of Benezette, Pa., was first seen by me at Driftwood, Pa., February 26, 1892, at the request of Dr. V. K. Corbett, of Caledonia. She was then fourteen years of age and had never menstruated. About eighteen months before I saw her, her abdomen began to enlarge. Six months afterward Dr. Corbett was consulted for an attack of considerable pain in the left side of the abdomen. He found that she was only voiding eight ounces of urine in the twenty-four hours, but under proper treatment this soon reached a quart in amount, and has remained so ever since. He never discovered any albumin in the urine. In October, 1891, she had been tapped by a gynecologist, who is said to have diagnosticated a solid and probably malignant tumor, connected most likely with the liver, omentum, and ovary, and who deemed its removal not feasible.

I found the abdomen enormously distended with fluid and advised very strongly that a small incision should be made in the abdominal wall, so that I could determine the relations of the growth with accuracy. Her father, however, was not present, and had made it a condition that nothing beyond tapping should be done. I tapped her immediately and removed considerably over three gallons of amber-colored fluid. When this was evacuated I discovered a lobulated tumor on the right side of the abdomen, under the liver and apparently attached to it. It was evidently cystic in part, there being at least two cysts perceptible. Each of these I tapped, obtaining from the opper one a light fluid and from the lower one a much darker fluid. On account of her age no vaginal examination was made. The fluids pointed strongly toward an ovarian cystoma. I again advised an exploratory incisino.

April 29, 1890. The patient was finally brought to the Jefferson College Hospital. She had been tapped twice since February, 1892, the last time in February, 1893, when six and a half gallons were drawn off. She is now enormously swollen. The measurements are as follows: From the ensiform to the umbilicus, 16½ inches; from the ensiform to the pubes, 29½ inches (this measurement in myself reaches from the ensiform to the middle of the calf of my leg); circumference, 49 inches. The veins over the abdomen are very large. Nothing can be made out in the interior in consequence of the enormous abdominal distention. Examination of the urine shows no albumin and a very slight trace of sugar (?)

Operation.—April 30, 1893. A small incision was made in the median line above the umbilicus, as the greater mass of the tumor lay there. A large trocar was thrust in and evacuated a very large quantity of characteristic opalescent ovarian fluid. The escape of this fluid revealed through the abdominal wall large masses lying especially under the liver and in the right iliac fossa. After this evacuation I enlarged the incision until it measured eventually about eight inches in length, and found an enormous ovarian cyst, reaching up to the diaphragm and pushing everything out of its way. There were a number of moderate adhesions, chiefly to the belly wall and the omentum. The viscera were fortunately entirely free. The pedicle was only 2½ inches broad. The tumor arose in the right ovary, the left ovary being healthy but small.

The weight of the solid mass removed was twenty-seven pounds, and by actual weighing the fluid removed weighed eighty-four pounds, making a total of one hundred and eleven pounds. The child herself weighed but sixty-eight pounds.

After the removal of the tumor I never saw so curious a looking abdominal cavity. It looked almost like that of an eviscerated cadaver in the dissecting-room. The tumor had so pushed the liver to the right and backward, and the stomach to the left that nearly the whole of the diaphragm was exposed, and flapped up and down with the pulsations of the heart. Down the middle of the cavity the bodies of the vertebra were entirely exposed, and showing the aorta and vena cava to their bifurcations, the intestines being a very minor consideration and pushed to each side in the hollow of the ribs and the lumbar region. When the abdominal wall was sutured the abdomen was excessively scaphoid, the anterior abdominal wall lying directly on the aorta and vertebræ. The puckering of the skin, although moderately marked, was much less than I had expected.

When the operation was completed a glass drainage-tube was inserted, and she was put to bed in very fair condition, in view of the gravity of the operation. The tumor was a multilocular cyst.

May 18, 1893. The child has made an uninterrupted recovery. The drainage tube was removed on the fifth day, when the discharge had become almost nothing, but three days later a slight rise in temperature took place, and the discharge recommenced. A small rubber drainage tube was therefore reinserted for a few days. She sat up at the end of two weeks, and will go home as soon as the slight discharge from the drainage opening ceases.

Remarks.—I have not had time to search through the literature of ovariotomy, but so far as my memory serves I have never known a larger tumor removed from a child. It weighed just one and a half times as much as the patient, Her recovery has been most satisfactory in spite of a very poor and capricious appetite. The chief lesson the case teaches is the value of an exploratory incision in every case of doubt. Had this been done, instead of mere tapping, in October, 1891, when the tumor was much smaller, the prognosis would have been much more favorable, and she would have been spared a year and a half of needless suffering. What seemed to be a most formidable operation really proved to be almost a simple one, the adhesions and the pedicle being most favorable for the speedy recovery which has ensued.—*Nashville Jour. Medicine and Surgery.*

BRILLANTINE is a preparation for the hair, for which the *Bullet. de Lyon* gives the following three formulas:

1. Castor oil 6, castile soap 2, benzoin 2, alcohol 200 gm., attar of roses or of neroil sufficient,
2. Glycerine 10, alcohol 100, rose water 100 gm.
3. Castor oil 6, glycerine 6, benzoin 2, alcohol 200 gm. perfume.

THE PRESENT POSITION OF THE SURGERY OF THE PROSTATE.

Dr. J. William White, read a paper on this subject before the American Surgical Association. In regard to the nature of the prostatic enlargement it was held that the prostate gland was a part of the sexual apparatus and not chiefly an accessory organ of micturition, and that the growth or growths which make up the enlargement are analogous to the fibro-myomata so frequently found in the uterus.

The changes in the bladder are due to the mechanical obstruction, the circulatory disturbance produced by pressure on the prostatic veins and to septic infection.

The symptoms of prostatic enlargement were discussed at length. In regard to treatment, purely expectant treatment is proper only where the enlargement has produced no symptoms and catheterization is easy and shows no residual urine. Ergot is the only drug that offers any prospect of usefulness, but it is far from demonstrated that it has any distinct effect. Palliative treatment consisting in the systematic use of steel sounds for dilatation and the employment of the catheter is of great value in a large number of cases.

The following operative methods discussed:

1. Overstretching of the prostatic urethra. This is not likely to be followed by good results in cases where the median lobe and the vesical neck are chiefly involved. In lateral hypertrophy where the urethra is simply narrowed it may be of use.

2. Perineal prostatotomy should be regarded as that of choice in cases in which with marked diminution of the expulsive force, and with cystitis there are evidences of widespread degenerative disease or of distinct renal disease, toxemia and general feebleness.

3. Perineal prostatectomy, where the growth can be reached by the finger and is of small size or pedunculated; perineal prostatotomy can always be converted into a prostatectomy.

4. Suprapubic prostatectomy is the operation to be preferred in those cases in which palliative treatment having failed there are unmistakable indications that the local conditions are worse, the general health remaining unaffected.

In conclusion, the speaker said that some time ago the thought occurred to him that possibly if the analogy between uterine fibro-myomata and prostatic growth was a real one, castration might have the same effect upon the latter that oophorectomy does upon the former. At this time he had not read of the alleged prostatic hypertrophy in eunuchs, geldings, etc. He instituted a serise of experiments on dogs to determine the effect of castration on the size of the prostate. It was found that the average weight of the prostate in dogs was 35.3 grams. The dogs were killed at varying intervals after the operation, the longest period being seventy-two days, and in all there was a marked diminution in the weight from 2.5 grams to 5.5 grams according to the weight of the animal and the period at which it was killed.

The author did not wish to be understood as advocating the measures which these studies would indicate. He simply presented the subject as a line of thought which had occupied his mind at odd times in order to have the criticism of the Association. As regards the employment of castration as a therapeutic measure in prostatic hypertrophy, the final answer must be left with the patient. If the time comes when we can promise equivalent results to those obtained by oophorectomy in uterine fibroids, there will probably be no lack of cases willing to submit to the operation.

Alopecia Circumscripta.

Dr. L. Duncan Bulkley writes, in the Journal of the American Medical Association, that in the parasitic form he employs:—

℞	Hydrarg. bichloride	gr.j
	Lanolin	℥j.
	Terebene	mj.

Sig.—Apply twice daily.

Strychnine for Snake Bite.

E. A. Thomas, M. D., Assistant Surgeon, Nagino, India, reports, in the *Indian Medical Record*, five consecutive cases of bites by poisonous snakes, in which prompt recovery ensued upon the administration of staychnine, in full doses, repeated hourly until out of danger, which was usually determined after the third dose.

PTOMAINE POISONING.

Dr. J. C. Gilbertson, of Luverne, Minn., writes upon this subject in the R. I. *Medical Science Monthly* as follows: Many of the common ailments or diseases that the human race is heir to are now universally conceded to be caused by living organisms. Bacteria or microbes have been wandering about upon the face of this earth for nearly 6,000 years, seeking whom they may devour. So deadly and so appalling has at times been their work that humanity has time and again cried to heaven for deliverance. Yet so successfully have these germs labored in disguise that it is only in the latter part of this ninteenth century that they have at all been discovered. The scientist and microscopist, the chemist and bacteriologist of the last ten or twenty years have somewhat succeeded in piercing the curtain and viewing a few of the hitherto unknown actors.

Bacteria are the lowest forms of vegetable life. They are minute, unicellular in structure, and multiply by division and the formation of spores. They split up complex substances into simple elements through the process of putrefaction. Most bacteria are harmless, but some after gaining admission to the body are capable of producing disease and are known as pathogenic.

Recognizing the fact that germs do bear a causal relation to some disease, the question arises, how do these organisms produce disease? Several theories have been advanced:

1. The germs deprive the blood of oxygen.

2. The bacilli accumulate and form mechanical obstructions in the vital organs.

3. The bacilli consume the proteids of the body.

All of these theories have been shown to be defective and none are at the present satisfactory. Hence a fourth and generally accepted theory:

4. Bacteria during their growth elaborate a chemical poison, which is soluble, and which when introduced into the circulation produces fever and the characteristic symptoms. This chemical poison is known as a ptomaine. We will then define a ptomaine as a product of bacterial decomposition. Vaughan gives an explanatory definition and defines a ptomaine as "a chemical compound which is basic in character and which is formed by the action of bacteria on organic matter."

A large number of the ptomaines are inert, others highly poisonous. We will consider the latter only.

This bacterial decomposition may take place in or outside the body. We will therefore, consider ptomaine poisoning in relation to the body from external and internal causes.

1. External causes. Whenever bacteria have under favorable conditions attacked matter outside of the body, and by decomposition have elaborated their characteristic poison, and this again has gained admission to the body, generally through the alimentary tract in food or drink. Under this head is poisoning from ham, sausage, oysters, mussles, milk cream, cheese, etc. We will not discuss each in detail. The ptomaine gaining admission is already in a soluble state, is quickly absorbed, and symptoms usually develop early. There is much similarity in symptoms and they may be grouped under the following divisions:

1. A true gastro-intestinal irritation, in which we have vomiting, purging, cold, clamy skin, anxious countenance and much depression.

2. Purely nervous, sensation of heat, itching, nettle-rash eruptions, swelling, asthmatic breathing, etc.

3. A kind of intoxication, in which we find dizziness, muscular weakness, muscular spasm, paralysis, coma and death.

Treatment—Preventive and symptomatic.

2. Internal causes.

Most of the infectious diseases, suppuration, purperal fever, etc., are conceded and many proven to be due to pathogenic bacteria. We will consider a few:

Diphtheria.—Says Vaughan: "That the Loffler bacillus is the cause of diphtheria no one can now deny. The fact that this germ, although found only at the seat of innoculation causes marked systematic disturbances, indicates that its action must be due to its soluble products."

The bacillus gaining admission to the body and finding lodgment in its favorite location about the tonsils, in the pharynx, larynx or nares, acts as a local irritant producing an exudative inflammation. In so doing it first induces death of the cells with which it comes into contact, particularly the superficial epithelium and the leucocytes. The further action of this necrosed tissue and of the bacilli results in the elaboration of a ptomaine which is soluble, becomes absorbed into the circulation and produces the marked systemic infection. From this point of view we consider diphtheria as primarily a local disease, and the constitutional disturbances as due to poisoning by the ptomaine of the diphtheritic bacillus.

Typhoid fever. Most of the bacteriologists and the profession at large believe that the bacillus of Eberth is the specific cause of typhoid fever. To this belief Vaughan and a few others take exception. At present, however, I am willing to recognize Eberth's bacillus as a cause of typhoid fever. This bacillus, if it succeeds in passing the stomach without being destroyed by the gastric juice, seems to have a special affinity for Peyer's patches of the small intestines. Here it acts as a local irritant, causing hyperemia, death of cells and necrosis, and in so doing elaborates its characteristic poison, by some termed the "typhotoxine," which is largely responsible for the marked constitutional symptoms.

Tetanus.—The bacillus of tetanus is primarily a native of the soil, but is frequently found on rusty nails, fork tines, splinters, etc. The bacillæ, I believe, have never been found in the blood or tissues beyond the point of introduction. Their action is entirely local. Here they multiply and eloborate their ptomaines, which have a special action on the spinal cord and spinal centers.

To bring to a close, I am inclined to the following deductions:

1. Pathogenic bacteria cause disease by the elaboration of ptomaines.

2. The primary action of pathogenic bacteria is local and the constitutional disturbance is brought about by the absorption and action of ptomaines.

How, then, are we to meet and counteract these conditions? Bacteria, being living organisms, are made inert or destroyed by antiseptics and germicides. Ptomaines, being chemical productions, remain uninfluenced thereby.

Our first effort then becomes to destroy the bacilli, and as far as possible to prevent the elaboration of ptomaines. This is best accomplished by early, thorough and continuous local antiseptic treatment.

Our second effort is to counteract the depression and marked constitutional disturbance caused by the absorption of the chemical productions. This is best accomplished by supportives, stimulants and remedies to counteract the prominent symptoms as they arise.

Pruritus.

Dr. Colombini praises the following formulæ:

℞	Menthol	10 parts.
	Ol. amygd. dulc	100 parts.—M.

℞	Zinc. Oxid.,	
	Amyli pulv	āā 50 parts.
	Menthol	1 to 6 parts.
	Paraffin. mollis	100 parts.
M.	Sig.—Pasta.	

℞	Zinc. oxid.,	
	Bismuth subnitr	āā 10 parts.
	Menthol	1 to 3 parts.
	Amyli pulv	30 parts.—M.

—*British Journ. Dermatology.*

Burns.

The following useful combinations are given by Saalfeld:

℞	Tannic acid	ʒss.
	Sp. vini rect	f ℥i¼.
	Collodion	f ʒv.
	Tr. benzoin	f ʒss.
M.	Paint upon the surface.	

℞	Alum	ʒj.
	Yelk of egg (boiled)	no. j.
	Glycerin	f ʒss.
M.		

Or—

℞	Alum	
	Borax	āā ʒss
	Rose-water	f ℥v.
	Tr. benzoin	f ℥i¼
M.	Sig.—Apply upon compresses.	

IRON rust on muslin or white goods may be removed by saturating the spots with lemon juice and salt, and exposing to the sun. Repeat if necessary. To prevent the appearance of the spots, when the clothes are being washed, it is well to have them enclosed in a muslin bag during boiling.

OINTMENT FOR FRECKLES, ETC.; 5 parts of ammoniated mercury, and bismuth subnitrate, 2 parts olive oil, and 8 parts of glycerite of starch; or, 10 to 20 parts of betanaphthol, 25 parts each of starch, and zinc oxide, and enough vaseline to make 100 parts.

THE LIBRARY TABLE.

BOOK REVIEWS.

An Introduction to the Study of Diseases of the Skin. By P. H. Pye-Smith, M.D., F. R. S., F. R. C. P., Physician to the Department of Cutaneous Diseases in Guy's Hospital, London. In one 12mo. volume of 407 pages with 28 illustrations, 18 of which are colored. Cloth $2. Philadelphia, Lea Brothers & Co., 1893.

This Handbook is a reprint, with some variations and additions, of the chapters dealing with diseases of the skin which appears in Fagge's *Practice of Medicine.*

That this monograph should appear in such a notable work, is sufficient to commend it to all practitioners. To the dermatologist, student and teacher this work will be of the greatest assistance, introducing, as it does, the subject in a manner unknown to most modern textbooks. Diseases of the skin should be arranged (as they should be named) like diseases of other organs: *i. e.*, for convenience, either alphabetically or otherwise. The present volume opens with the most common inflammatory diseases, the superficial forms of dermatitis, eczema and its allies, psoriasis, erythema and their allied diseases. Then follow affections of the hair-sacs and cutaneous glands, including ringworm. Next come the deep inflammations and the hypertrophic conditions which result therefrom. Closely allied to the deep chronic forms of dermatitis are the important and well-defined diseases known as lupus and leprosy, and the chapters which treat of these are naturally followed by one on tumors and new growths. Then comes a short section on abnormalities of the cutaneous pigments and of cutaneous innervation, and the subject concludes with a chapter on the practical diagnosis of diseases of the skin in general.

An instructive and useful feature is the introduction of tinted diagrams illustrative of the favorite seats and distribution of cutaneous diseases. This is a point of the greatest practical importance, and one that has been to a large extent neglected by dermatologists since the time of the writings of the late Tilbury Fox.

The volume closes with a section of formulæ, which will prove suggestive and of the greatest assistance to the general practitioner in dealing with this class of troublesome diseases.

Various Forms of Hysterical or Functional Paralysis. By H Charleton Bastian, M. A., M. D., F. R. S. Philadelphia. J. B. Lippincott Company, 1893

The nucleus of this book was published last year in the *Lancet* in the form of four lectures. The records of several new cases have now been incorporated, and the discussion of the subject has, in reference to some points, been still further developed. Attention is called to the error in employing synonymously the terms "hysterical" and "functional" since there are many examples of functional paralysis which cannot properly be classed as hysterical. Indeed, not more than one-third of all functional cases belong to the hysterical group.

A primary division is made in functional paralysis of cerebral type and of spinal type. The following table gives the characteristics of the type which are differentiated by the author:

CASES OF FUNCTIONAL PARALYSIS OF CEREBRAL ORIGIN.

VARIETIES.	CHARACTERISTICS.
1. Affection of kinæsthetic centres in Rolandic and marginal areas alone.	Loss of muscular sense, with motor paralysis. Also slight loss of tactile sense, with defective power of localizing.
2. Ditto, *plus* an affection of sensory region of internal capsule.	Ditto, *plus* more or less complete hemi-anæsthesia. (The paralysis flaccid or spastic).
3. Affection of sensory region of internal capsule alone.	No motor paralysis. More or less complete hemi-anæsthesia (superficial, or superficial and deep, the latter including loss of muscular sense).
4. Affection of efferent fibres from kinæsthetic centres in Rolandic area.	Aphemia or hysterical mutism. If purely motor paralysis of limbs, then no loss of muscular sense.

CASES OF FUNCTIONAL PARALYSIS OF SPINAL ORIGIN.

5. Affection of pyramidal system of fibres in spinal cord.	Spastic paralysis, with no distinct loss of muscular sense. Also no "cerebral hemi-anæsthesia" or other cerebral symptoms.
6. Affection of anterior cornua in certain segments of spinal cord.	Flaccid motor paralysis, with or without some loss of sensation. No distinct hemi-anæsthesia, and no marked loss of muscular sense.

In order to form a final judgment in doubtful cases, we are ultimately compelled to rely on the following two sets of considerations:

"1. As functional defects tend specially to affect particular regions of the brain and spinal cord, we have to consider whether the grouping of symptoms met with in the case before us in such as our clinical knowledge has taught us may be due to a defect in one or other of such regions.

"2. We have to consider whether the mode of onset, coupled with the patient's general state, together with his or her immediate and remote history and family history, taken as a whole, most strongly favors the notion that we have to do with a malady due to mere functional defect, or to the existence of some organic lesion.

"This may seem a complicated procedure, and not too calculated to land us in certainties; but unfortunately it is the only safe method available for making a trustworthy diagnosis."

The work is concluded by three lengthy appendices: 1st, The "muscular sense:" its nature and cortical localization; 2d, on the neutral processes underlying attention and volition; 3d, Is there a double representation of touch and common sensibility in the cerebral hemispheres? The book is worthy of a careful reading by those interested in this line of work.

International Clinics. A quarterly of Clinical Lectures on Medicine, Neurology, Pediatrics, Surgery, Genito-Urinary Surgery, Gynecology, Ophthalmology, Laryngology, Otology, and Dermatology. By Professors and Lecturers in the leading Medical Colleges of the United States, Great Britain, and Canada. Edited by John M. Keating, M.D., LL.D., Colorado Springs, Col.; Judson Daland, M.D., Philadelphia; J. Mitchell Bruce, M.D., F.R.C.P., London, England; David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland. Volume I., Third Series, 1893. Philadelphia: J. B. Lippincott Company, 1893.

This issue contains fifty-one articles written by fifty prominent men, most of whom are teachers in schools and hospitals of this country and of Europe.

The subjects selected are timely and will be found valuable by the general practitioner; they are not the mere recital of unusual and curious cases, but are those which the average man is likely to come in contact with, and the offering of many new remedies together with the results and effects will be found of great assistance.

The articles, coming as they do from men with large and varied experiences, not only in hospital work, but in private practice as well, cannot do otherwise than impress and instruct the reader.

CURRENT LITERATURE REVIEWED.

THE SAINT LOUIS MEDICAL AND SURGICAL JOURNAL

for July. Dr. A. H. Ohmann-Dumesnil contributes an article on

Erythema Exfoliativum Recurrens,

discussing several cases reported by other observers and adding the report of a case of his own. The paper is illustrated by cuts showing the patient during the process of skin shedding in one case and the gloves cast off from the hands in another. The treatment adopted by the author, in the case observed by him, consisted in the use of quinine in three grain doses every three hours, as the symptoms of the case were always strikingly malarial.

For the condition of the skin which succeeded desquamation, the following ointment was ordered with complete success, as it proved efficient in relieving the sensitiveness of the denuded integument and caused a disappearance of the pruritus, besides acting as an efficient protective during the complete restoration of the horny layer.

℞ Campho-phenique........................ ℥j.
Albolene (solid)........................... ℥iij.
M. Ft. Ungt.

A few points which have been noticed by the patient and to which she has drawn attention, are the following: Each attack of desquamation comes on just one week before the menstrual flow. Her attention was called to this circumstance by the fact that it occurred each time in that way, and it can hardly be looked upon as a coincidence. She further states that after taking an ordinary dose of quinine, she experiences a prickling, tingling pain in the thumb. On this account she is inclined to believe that the general desquamation is due to the remedy, but this is evidently a *non-sequitur*.

The author is of the opinion that relapsing desquamative erythema is beyond all doubt a trouble due to disturbance of the trophic nerves.

The treatment is a very simple one, consisting merely in protecting and soothing measures. Whilst in many cases symptomatic treatment has been employed, there is no evidence that it exercised any particular beneficial action, as far as the cutaneous symptoms were concerned. The protective measures employed have certainly had a direct effect as prophylactics in preventing a possibly graver condition which might be induced by irritation due to an extraneous source. Of course, such measures are not only proper and rational, but even imperative. To neglect their application would certainly argue a disregard for the patient, but also a serious disregard for the exigencies of the case in hand.

Dr. C. Bernard Wolff contributes a translation of a paper by Dr. P. G. Unna, of Hamburg, on "Inflammation and Chemostasis."

Dr. W. P. Manton discusses the subject of "The Diagnosis of Abdominal Tumors," showing the various means by which the position, size and probable character of the condition is discovered. The author regrets that abdominal surgery is regarded in some quarters as so simple a branch of surgery that men rush into it without the proper training.

Dr. Frank Woodbury contributes a clinical lecture on the "Treatment of the Gouty

State." In the treatment he regards the use of some good natural lithia water as very essential, the good effects of which he ascribes to the peculiar combination of the various salts which it contains as much as to the amount of lithia present. He thinks the profession is inclined to take too narrow a view of gout at the present day and, instead of the gout being caused by the uric acid in the system, he regards the disease as being responsible for the excess of uric acid.

The remaining papers in this issue are: "Prognostic Aphorisms" translated from the French of Dr. Gabriel Reignier by Dr. Charles Everett Warren; and the report by Dr. C. H. Powell of a "Case of Hæmato-Salpinx and Pelvic Hæmatocele." The patient recovered from the laparotomy.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES,

for August. Dr. James J. Putnam contributes a paper on

Cases of Myxœdema and Acromegalia Treated with Benefit by Sheep's Thyroids.

The author states that the method of administration by the stomach has not failed in any genuine case and moderate quantities are sometimes so effective that we have no reason to conclude that any considerable part of the dose passes unabsorbed in most conditions of the stomach and intestines. The loss of weight is an early sign of improvement; but it sometimes goes beyond the requirements of health, which fact suggests that under certain conditions, the thyroid secretion may modify the tissue changes even of healthy persons. Immediately after the injections, and even after the stomach doses, of thyroid, there is sometimes a rise of temperature and pulse, increased secretion of urine, faintness or headache, and other symptoms; as the treatment goes on these symptoms may continue for a time, and be associated with prostration, cardiac weakness, anginoid, neuralgic, or other pains, and even albuminuria. It is striking that these unpleasant signs sometimes continue for weeks after the suspension of treatment.

The paper contains the report of a case observed by the author and an exhaustive discussion of the subject of myxœdema in which the literature of the subject is very thoroughly investigated.

Chloroma and its Relation to Leukæmia

is the title of a paper by Dr. George Dock. The case observed by the author raises the number of reported cases to seventeen. In all cases the most obvious point in common is the peculiar color of the morbid growths found, which suggested the name chloroma or cancer vert. In the author's own case the color could best be described as pea-green. It differed, however, in various parts, so that some were pale sage-green, others darker, or again with pink, brown or red stains. The small growths in the liver and kidneys were almost white, but in the pancreas and thymus the color was distinctly green, though pale. The color gradually faded from the preserved specimens. Owing to the fact that the solutions were frequently changed, it is impossible to tell whether the color was dissolved out or bleached. The cause of the color still remains unknown. The external surface of the tumors were smooth or nodular—tumors proper, as distinguished from uniform infiltrations, being usually nodular. In regard to the seat of these growths: In all cases reported some part of the head was affected. Less frequently we find the green substance in the periosteum of the vertebræ and ribs adjoining. The marked predilection of the periosteum, especially that of the head, has been noticed by all observers, and most of them look on some part of the periosteum of the head or face as the starting point. The new growths are sarcomatous, in the sense that they are "connective tissue formations, with excessive development of the cellular elements." For the present, the author thinks we cannot do better than to use the term "Chloroma" in describing these tumors and some synonym, as lymphoma, lymph-adenoma, lympho-sarcoma, or myeloma, could be used to express peculiar features or the views of the reporter.

Chloroma is most frequently in early life—the average age of fifteen cases being 15–26 years. The course of the disease is short. The average duration, in twelve cases in which it is given, is five months. Exciting causes are rarely given in the reported cases. In one case the disease began with toothache, and the disease first appeared in the site of the extracted tooth. The fact that three cases were observed in Prague, three in Glasgow, and two in Paris seems worth noting. The family and previous histories were usually good.

The important points in the diagnosis are: The appearance, usually below the age of twenty, of anæmia without evident cause, with loss of strength, dyspnœa and emaciation; hemorrhages in skin, mucous membranes (epistaxis) or internal organs (retina); rapid pulse; ocular symptoms, such as difficulty of vision, strabismus and especially exophthalmus, without the special features of Basedow's disease and with tumor in the orbit; deafness and ringing in the ears; tumors under the temporals or on the cranium in other parts, or in other parts of the body. Before the appearance of the tumors the diagnosis would be doubtful, but after the appearance of tumors in the orbit and under the temporals it could be made almost with certainty.

In such cases the blood should be examined by all the methods known, either to detect an increase or alteration of the leucocytes already present, or, if that be not found, examinations should be made at short intervals in order to observe the possible event of a leukæmic condition, which might come on only a short time before death. The spleen, liver, lymph glands and bones should be examined with reference to alteration in size and tenderness. The literature of the subject is thoroughly discussed in the article which is illustrated with a portrait of the patient whose case is described and also a colored print of the microscopical appearance of the blood.

Dr. Douglas Graham contributes a paper on

Massage in Muscular Rheumatism, and its Possible Value in the Diagnosis of Muscular Rheumatism from Neuritis.

The author ventures the suggestion that when a case of apparent muscular rheumatism does not only not yield but also does not stay improved after massages, then the probability is that the case is one of neuritis affecting the nerve fibres that supply the impaired muscles. This probability would be strengthened when the pain is uniform, affecting the same muscles on both sides, when it is worse at night whilst the patient is at rest and warm in bed, and better when up, moving about, which calls into play the inhibitory action of the will; whereas muscular rheumatism is aggravated by motion and relieved by rest and warmth. The difference in favor of neuritis would be increased when the consistence of the affected muscles does not differ from that of the well muscles or is somewhat diminished.

The relief from discomfort, and freedom of motion experienced after each massage, in those cases which are too apt to be snappily diagnosed as muscular rheumatism, but most likely are neuritis, is so great that, though the temporary improvement may not be held, yet the patient is apt to demand that the massage be continued until the ultimate result, which, with appropriate internal medication, should be recovery.

The Anatomy of the Vermiform Appendix

Is discussed by Dr. A. Hewson in a paper on the subject. In his researches the author examined seventy-four subjects. In twenty-eight subjects the most frequent position for the appendix in relation to the ileum was below and behind, remaining in the false pelvis. The next most frequent was below the ileum, remaining in the false pelvis.

In sixteen subjects it was either below and behind the ileum in the cavity of the true pelvis and in the remaining eight was either below or behind the ileum and above the innominate crest, i. e., not in the false pelvis even. In fifty-seven subjects the position of the appendix was on the inner and posterior aspects of the colon, and in the order and number of frequency—inner, eight; posterior, six; and inferior, two. The average distance from the anterior superior spine of the ileum to the base of the appendix was 7.2 cm. The average measurement from the anterior superior spine of the ileum to the apex of the appendix was 8.3 cm. The average distance from the umbilicus to the base of the appendix was 8.1 cm. The average distance from the umbilicus to the apex of the vermiform appendix was 10.1 cm. The great variation in the amount of mesentery belonging to the appendix leads the author to the conclusion that one must always expect to find the mesentery extending more than one-half the length of the appendix, and that from its free extremity one must expect great latitude of position—which may be assumed both on account of its length and also on account of the manner in which its mesentery is attached.

Dr. Charles J. Foote presents the "Report of a Case of Grangrenous Stomatitis, with a Bacteriological Examination."

Dr. John K. Mitchell presents the report of "A Case of Local Catalepsy," the left hand being affected. The author states that he is unable to find the report of a similar case.

PERISCOPE.

THERAPEUTICS.

Poisoning with Turpentine.

Carvete (*Canadian Practitioner*) has reported the case of a woman who at bedtime, took half an ounce of old spirit of turpentine mixed with an ounce of whiskey, in mistake for castor oil. The mistake was only noticed after the turpentine had been swallowed, but nothing was done at the time except to take a dose of castor oil. The patient shortly afterward fell asleep, but was awakened in the course of five hours with sickness of stomach. A little later she vomited, and after the lapse of several hours more she had a convulsion, followed by loss of consciousness. The pulse was weak, feeble, rapid; the face and lips pale; the patient restless, at times delirious and talking incoherently, but capable of deing partly roused. Urine had been passed in generous quantity. Whiskey, spirit of nitrous ether, milk, and sweet oil were given, and warmth was applied to the body. Vomiting was induced by irritating the fauces. The vomited matters had a strong odor of turpentine ten hours after the fluid had been taken. After free vomiting, consciousness was regained and complaint was made of a burning pain in the right leg. Examination disclosed the presence upon the posterior aspect of the knee of a blister 5 by 12 inches in extent, the contents of which were watery and emitted an odor of turpentine. Gangrene of the superficial parts took place in this area, and fifteen weeks elapsed before the resulting ulcer healed.

Therapeutic Effect.

This interests the physician, who is desirous of establishing a reputation for success; interests the pharmacist, who desires to establish the confidence of the physician in the remedies furnished, and interests the patient, who is anxious to make a speedy recovery.

IT IS OFTEN A DISAPPOINTMENT.

1. Because the patient does not follow directions.
2. Because drugs cannot benefit the case.
3. Because the dosage is incorrect.
4. Because a wrong remedy is selected.
5. The remedy is deficient in strength or is over active.
6. The vices or habits of the patient neutralize or abort treatment.—*Phar. Era.*

MEDICINE.

Parotiditis Complicated by Orchitis, Prostatitis, and Hemoptysis.

Comby (*L' Union Medicale*) has reported the case of a gardener, twenty-nine years old, who, after having worked all day in a hot house, was seized at night with a chill; the right testicle was noted to be swollen, red, heavy and painful. During the night there occurred sweats, with headache, pain in the back and in the extremities, so that sleep was prevented. There was also evidence of the existence of a mild prostatitis. On the following day delirium set in, and a day later still painful swellings appeared in both parotid regions. There were fever and dyspnea, and in the midst of a paroxysm of coughing, profuse hemoptysis occurred. Improvement now soon set in and in a short time the man was convalescent. Examination of the chest failed to disclose evidence of organic disease; neither did the urine present any abnormality. The treatment employed consisted in the administration of quinine sulphate, purgation, the application of emollient compresses to the testicles, and a milk diet.

Peculiar Symptoms in an Infant Due to Contracted Prepuce.

Dr. S. E. Moses, reports a case of an infant, two months old, weak and delicate, who was suffering from an attack of whooping cough, was suddenly one night attacked by what was described as inward convulsions. I sought the aid of Dr. Crombie, and on enquiry found that the child generally cried before passing urine, and that the so-called fits came on every two hours or so. Our attention was drawn, therefore, to the urinary organs, and we found a long tight prepuce with a pin-point opening. We were fortunate, for while we were examining the child, a fit came on. There was no convulsive twitchings nor spasms of any kind; on the contrary the child lay limp and lifeless; the respiration stopped, and we had to resort to artificial breathing for some time before the infant breathed, and then it came in gasps for some minutes till eventually the respiration became normal. The heart beats were 20 in the minute, and gradually as the respiration returned they rose to 120. The lips were livid, the eyes fixed and not sensitive to touch. The child passed urine and the fit shortly after wore off. I watched the child in several such attacks—some lasting 15 to 20 and 26 minutes. Dr. Crombie and I gave strychnine, but without effect, so on the following day we decided upon slitting up the foreskin, which we did, and no fit such as described has again returned. I would wish in this case to point out the crying of the child before the passing of water, the regularity of the return of fits every two hours, the time the bladder took to fill: and the passing of water before the fit wore off, and the immediate cessation of fits after the operation.—*Indian Med. Gaz.*

How to Give a Fomentation.

Doubtless every physician knows how to apply a fomentation, yet the following suggestions may be of value to some one (*Jour. Bact.*): A flannel cloth may be folded, wrung out of hot water, and applied directly to the skin; nevertheless, it is much better, after wringing out the flannel as dry as desired, to fold it in a dry flannel cloth of one or two thicknesses before applying it to the patient. A little time is required for the heat of the fomentation to penetrate the dry flannel, and thus the skin is allowed an opportunity to acquire tolerance for the heat, and a greater degree of temperature can be borne than if the moist cloth is brought directly in contact with the surface. The outer fold of dry flannel will also serve to keep the cloth warm by preventing evaporation.

A fomentation is sometimes needed when no hot water is at hand. It is not necessary to wait for water to be heated in the usual way. Soak the flannel in cold water, wring as dry as desired, fold in a newspaper, and lay upon the stove or wrap it about the stovepipe. In a few minutes it will be as warm as the patient can bear. The paper keeps the pipe from becoming moistened by the wet flannel, and at the same time prevents the flannel from being soiled by contact with the pipe.

Fomentations thoroughly applied will relieve most of the local pains for which liniments, lotions and poultices are generally applied, and are greatly to be preferred to these remedies, since they are cleaner and aid nature more effectually in restoring the injured parts to a sound condition.

ARMY AND NAVY.

U. S. ARMY FROM JULY 30, 1893, TO AUGUST 5, 1893.

Major Alfred A. Woodhull, Surgeon U. S. Army, is granted leave of absence for one month and fifteen days, on account of sickness, to take effect on or about August 15th, 1893.

Leave of absence for two months, to take effect about August 10th, 1893, is granted Captain Edward C. Carter, Assistant Surgeon U. S. Army.

Captain Walter D. McCaw, Assistant Surgeon, is relieved from duty at Camp Pilot Butte, Wyoming, and ordered to the Presidio of San Francisco, California, for duty.

THE

MEDICAL AND SURGICAL

REPORTER.

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ORIGINAL ARTICLES.

SOME NOTES AND SUGGESTIONS ON ASEPTIC AND ANTISEPTIC SURGERY OF THE PRESENT TIME.*

FRANKLIN STAPLES, M. D., Winona, Minn.

I am persuaded that the discoveries, the improvements in methods and material, and the work that has been done in this department constitutes the most important advance in the surgery of modern times; and this, not only because by its means and methods we are able to do old operations more successfully and with quicker and better results, but because new fields have been opened and a great number of life-saving operations in abdominal, thoracic and brain surgery, which before could not have been safely attempted, have been rendered possible and practicable; and, of no less importance is the fact that our means of diagnosis have been greatly increased. It is in the memory of some present, when to operate with great rapidity was regarded as evidence of the greatest skill in operative surgery. The introduction and the use of anæsthetics and the better knowledge of anatomy and pathology in later times, has done much to do away with this opinion. Being able now to take time in our work, and by means of our aseptic and antiseptic methods, to guard against the evil results which would otherwise follow and which formerly did follow our operations we are able to make explorations into organs and cavities throughout the body that in pre-antiseptic times could not be safely done. Thus it is that our means of better diagnosis have been greatly enlarged, and much that is new in pathology has come to our knowledge. The literature of this subject made within the last quarter of a century has come to be immense. It now has place in the standard works of this country and of the world, as well as in the medical and surgical periodicals of the day. The excellent practical work of Gerster, of New York, especially deserves attention and study.

Mr. Lister, of London, began to make known his work in 1865. W. Watson Cheyne, of London, whose article on "The Antiseptic Method of Treating Wounds," appears in the *International Encyclopædia of Surgery* by Ashurst, says, that for several years previously he (Lister) had been impressed with the great evils which resulted from the putrefaction of discharges in wounds, and, though he had in many ways succeeded in lessening the occurrence of putrefaction, yet it was not until after he had examined the results of Pasteur's researches on spontaneous generation and on the causes of putrefaction, that he was able to systematize his work.

Up to the time of Pasteur there seem to have been two opinions, especially among English pathologists, as to the causes of putrefaction or fermentation, so called, in the fluids on diseased and injured surfaces and in the tissues of the living body, viz.: first, that this process of change was due to the effect of *the*

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*Read before the Southern Minnesota Medical Association, August 3, 1893.

gases of the atmosphere upon the organic fluids after their exit from the tissues and after they had lost their vitality; and second, that the changes of putrefaction were due to the spontaneous alteration in the fluids and tissues without the intervention of any extraneous cause. Various attempts were made, especially by French surgeons, to prevent or lessen the process of putrefaction and suppuration, and thereby secure a union in wounds by what was called "first intention," by mechanical means for excluding the gases of the air from the injured or affected parts. All these attempts were in a great measure failures, not being founded upon a true pathology. Most of us remember the days of plasters and salves and all kinds of lotions used in the dressings of wounds. Time went on and progress was made. A single quotation from the article of W. Watson Cheyne shows among other things, the beginnings of carbolic acid.

While these attempts to prevent putrefaction by excluding the "gases of the air" were being made, indeed before they had been thought of, it had been found that the addition of various substances to organic fluids, whether outside of the body or in wounds, had a marked effect in retarding or preventing fermentation, and notably in preventing smell. These substances, therefore, received the name of "antiseptics" substances which prevented putrefaction, or, literally, which acted against the causes of putrefaction. These had been in use for a long time, chiefly in the form of various balsams, ointments, and lotions. The most efficatious balsams contained various essential oils, which we now know to be powerful antiseptics; while the best lotions had, among other substances, alcohol as their chief component. The treatment of wounds with antiseptics had, however, been carried on in a very desultory manner and without any fixed guiding principle, until the publication in 1859, of a paper by Corne and Demeaux on a paste containing coal tar. By means of this paper, the attention of French surgeons was at once attracted to the whole question of the use of antiseptics in the treatment of wounds, and for a year or two very fertile results were obtained. Lemaire more especially took the matter up, and after experimenting with an emulsion of coal tar with very good results, he at length found that carbolic acid was the chief constituent of coal tar, and accordingly introduced it into practice. During the same time various other antiseptics were brought forward, of which alcohol, in the practice of M. Nelaton, yielded the most important results. As a result of Lemaire's writings, the use of carbolic acid spread very rapidly on the continent, and even in Great Britain a few surgeons, Spence, Wood and others, employed it somewhat extensively. Carbolic acid as used in this way has however, many disadvantages, and hence many who had at first employed it largely gave it up almost entirely, and it seemed likely to fall into disuse, until it was again brought into notice by the writings of Lister."

We well remember the opposition that was made to what was called Listerism. It was in the comparatively early days of scientific study and work in bacteriology. It was then an easy thing for speakers and writers to sneer at the germ theory of disease, and to laugh at the means and methods of the germicide treatment. Even at the present time these objectors are unfortunately not all dead. It may not be counted to the credit of any professional man of science who, because there were imperfections in the early teachings and work in antiseptic surgery that further knowledge and experience had to correct, instead of doing honest and intelligent work in the way of clearing up the difficulties and finding the truth, did what he could to keep up the number of objectors and to retard scientific progress.

There are different classes of men who are always found on the back side of the wheel of progress. First: There are those who, by their mental and moral make-up, are naturally inclined to say no to whatever is first suggested or advocated by any one save themselves. Unfortunately there are, and always have been, men prominent in the profession who have manifested this spirit. Some seem ambitious to acquire distinction as wise critics and objectors. We have heard of men who were willing to commit murder and take the consequences for the sake of notoriety. Second: There are those who, even in surgery, are too busy even in their own way, or are too ignorant or indolent to keep abreast of the times. To be able to do and to do well in any department of science, requires intelligent observation, hard work and self-sacrifice. Third: There is another class, somewhat related to the class just described, which seem to hold that, in order to succeed in a financial way in the practice of medicine and surgery, all expense must be reduced to the minimum. It is not the policy or practice to any great extent, to buy books, take journals, or buy instruments and surgical material, such as are now required for good work in surgery, gynecology or obstetrics. Practitioners of this class are not likely to make their influence felt in the literature of the profession, nor are they in the way of doing much in the work of educating the race.

The old idea that decomposition and putrefaction were due to the gases of the atmosphere alone, or to the spontaneous generation of disease germs and the development of the same in the tissues themselves, was shown to be incorrect by the observations and experiments of Mr. Tyndall especially, and to his observations is largely due the better knowledge and work of the present day. I have recently read Dr. H. Gradle's book on "The Germ Theory of Disease," written ten years ago, and have been greatly interested in his clear and concise presentation of the subject of the germ theory as it bears upon practical medicine and surgery of to-day. After describing Tyndall's methods of removing from a certain portion of confined air all particles of foreign substance found to be floating in it, Dr. Gradle says, "In the most elegant manner did Tyndall show that this optically pure air, identical with the surrounding air but deprived of its dust, could not produce decomposition. Test tubes had been let into the bottom of air-tight cases from which all floating dust had been removed, and were filled through a moveable pipette perforating a rubber diaphragm in the top of the case, the entrance of the pipette being protected by a packing of cotton. After filling the glasses with various putrescible substances and plugging the pipette, they were sterilized by five minutes' boiling. Though exposed to the air in the box, these organic solutions kept sweet indefinitely, while a second set of test tubes similarly treated, were teeming with life and most offensive in smell after a few days' exposure to the impure air of the laboratory. Are not these various experiments complete proof of the role of atmospheric dust as a cause of putrefaction? Is there a link wanting in the chain of evidence that the air cannot by itself start decomposition, but that it contains floating particles, living dust, which on reaching the proper soil develop into the organisms whose life-work reveals itself in putrefaction." Our present practice of excluding, so far as possible, from our operating rooms and hospital wards all dust-making and dust-holding material, and of adopting such means as may prevent the diffusion of infecting germs from the bodies and clothing of operators, assistants and nurses, is based upon this doctrine, viz: that the germs of putrefaction in surgical injuries may be and are oftener than otherwise introduced in this way from without.

In these times of aseptic and antiseptic surgery we have learned many things, and are in the way to learn many more, and already we have had time to demonstrate the practical advantage of what we have learned. We have learned something of what the operating room should be, the advantage of the clean uncovered floor, the plain walls, the plain metal or polished wooden furniture, the plain dishes and trays for solutions and for holding instruments and material when in use. We have learned the use of hot water as a germicide. We have learned how much it means to take care of instruments and hands and the bodies and clothing of operators and attendants, in order that all may be entirely aseptic at the time of work. We have learned something about the necessary temperature in the operating room, especially when the great cavities are to be opened. We have learned what are the particular uses of the cat-gut, the silk worm gut, and silver wire, and how to make them and keep them aseptic. We have learned something about irrigating septic wounds, and of the various solutions for doing this work. We have learned something about carbolic acid, bichloride of mercury, iodoform, and other articles of like character. We have learned something of the dangers of impure sponges, and that there may be death on the hands and under the finger nails in obstetrical cases, in surgical gynecology and in laparotomies. We have learned to appreciate the services of a clean and faithful nurse, who keeps herself aseptic in body and clothing.

Dr. John A. Wyeth, of New York, in his recent excellent work on general surgery, devotes his first chapter to surgical dressings, ligatures, sutures, irrigating solutions, etc. This chapter, indeed the whole book, should be read by every practicing surgeon. I have here a few practical notes from the same.

Sutures and Ligatures.—Silk, cat-gut, silk-worm gut, and silver wire will meet every requirement in tying vessels and closing wounds. Silk is the invaluable suture material. The finest black iron dyed silk is needed in plastic surgery especially of the neck and face. Cat-gut should be kept in well closed jars made for the purpose, with the material completely covered with the pure oil of juniper. Ninety-five per cent. of alcohol is equally aseptic and is well adapted to the silk. Twisted silk is better than the braid.

Solutions.—For irrigating wounds, submerging instruments, and disinfecting in general, solutions of corrosive sublimate and carbolic acid are necessary, and pure alcohol, iodoform and chloride of zinc solutions may at times be used.

Koch has demonstrated that, as a germ killer, corrosive sublimate excels all known agents. The sublimate solutions vary in the proportion of one part of the bichloride to five hundred parts of distilled water by weight, or 1 to 500, 1 to 1,000, 1 to 2,000, 1 to 3,000 for use outside of the great cavities, and 1 to 8,000, 1 to 10,000, 1 to 15,000, and 1 to 20,000 within the cavities.

The sublimate solutions are only used for irrigation and for disinfecting the hands, sponges and gauze. All instruments are submerged in carbolic acid solutions or in alcohol.

The steam and carbolic spray, formerly used during an operation, has been abandoned for the purpose for which it was used, and is now only used to lay the dust or as an aid toward the more thorough cleansing of operating rooms and wards.

It is unnecessary for me to speak at length of the various kinds of material and apparatus now used in good antiseptic work. Surgeons have in daily use and understand the comparative value of iodoform, aristol, chloride of zinc, carbolized gauze, sublimate gauze, iodoform gauze, borated absorbent cotton, and the protectives of rubber tissue, oiled silk, and Mackintosh rubber cloth. The making and the care of the different drainage materials come in as an important part of the work. The essential of aseptic surgery is absolute cleanliness. This means vastly more than most people are able to understand. It applies to the body of the patient and to all surroundings, the substance of which or the emanations from which, may come in contact with the parts under treatment. Dry heat and hot water are important means. While asepsis is the first essential, to secure this condition antiseptic means and materials, such as have been enumerated, are indispensible.

It is not alone in the greater operations that asepsis and antisepsis have been found of great importance. In general practice in minor surgery we are able to have results which a few years ago were thought to be impossible. In lacerated flesh wounds and crushed limbs and extremities, such as we have in railroad coupling accidents for instance, good practice is as follows: After carefully cleaning the lacerations throughout their extent and judiciously trimming and removing the parts of flesh and bone that have been actually destroyed, thoroughly irrigating, then bringing the torn and cut parts together with aseptic sutures if necessary, dusting any denuded surfaces and along the line of the sutures with the iodoform or aristol powder, enveloping the whole with antiseptic gauze and with the rubber protective and bandage, and taking care that absolute rest shall be had and a proper temperature maintained, we allow days before a redressing is done. At the end of from four to six days and sometimes more, upon removing the dressings, we are apt to find a kind of parboiled condition of the skin, no redness, no swelling, no inflammation, no suppuration. This experience is in contrast with what used to be, for parts are saved and rendered useful which formerly were sacrificed, and the chances of general septicæmia are greatly lessened.

Many practitoners who are compelled to do more or less surgery, generally in emergencies and frequently in the country under unfavorable circumstances, may be inclined to say that these teachings are all very well and that the principles of practice are probably correct, but to do work in the manner required is impossible except in the well furnished operating rooms of modern hospitals, or at least in the cities where the means can be had and qualified nurses may be employed, and the practical conclusion is that it is useless to try. This is wrong. Let the surgeon thus situated make greater efforts to overcome, so far as possible, the difficulties with which he has to contend. Let him not fail to keep himself supplied with the best material required in first-class work and be diligent in learning how to take care of it and how to use it. Let his practice in the details of aseptic and antiseptic surgery not only enable him to secure good results, but be a means of education to the people with whom he has to do. In this connection and in closing I have a brief note or two from Gerster.

"Unremitting attention to, and a severe self-dicipline in always carrying out the measures of strict cleanliness known to be necessary to uniform success in the management of wounds, will gradually become, however irksome in the beginning, a mere matter of accustomed routine. As the mind and senses learn to exercise vigilance without special effort, the surgeon's results will become more and more gratifying.

"It is a great mistake, paid for by the loss of limbs and lives, to believe that the mastery of practical cleanliness, or asepticism, can be acquired without a clear comprehension of the principle, and without earnest and severe training in the handicraft of asepticism.

"The school of learning to employ the principles of asepticism is open to every general practitioner, in the treatment of many affections and injuries pertaining to minor surgery.

"Emergencies will necessarily involve varying modifications of the means, but never a deviation from the principle of asepticism.

"A hasty tracheotomy for the removal of a foreign body, a herniotomy to be done in the dead of the night amid the squalid surroundings of a tenement, or the first care of a common fracture or a gun-shot wound, will present special and varying difficulties, to be overcome only by good training, circumspection, and versatility. They can be overcome, as many examples in the experience of every successful surgeon testify."

In taking account of the present and rejoicing in the achivements of to-day, we should be glad to realize that we are in the way of progress which is still leading to a better and higher future.

COMMUNICATIONS.

BLOOD PRESSURE.*

WM. BAILEY, M. D., Louisville, Ky.

Recently attention has been directed to heart therapy, and to the influence of those remedies having direct power over the heart and circulation. Believing that influences exerted for circulation should extend much beyond this central organ, important as it may be, I ask attention to blood pressure.

Two factors are essential to the production and maintenance of tension. First, and perhaps chiefly, it is dependent upon the power of the heart. Next upon the size of the arterioles and capillaries.

Pressure is increased by whatever gives additional power to the heart, and it is diminished by whatever lessens the heart power. Pressure is increased likewise by whatever diminishes the size of the arterioles and capillaries, and it is diminished by whatever increases the calibre of these vessels.

Pressure is highest when the heart acts with vigor at the same time the vessels are contracted. Pressure is lowest when we have diminished heart power with dilated vessels. The work accomplished by the heart is dependent upon the size of the blood vessels more largely than often we recognize.

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* Abstract of essay read before the Medico-Chirurgical Society of Louisville, Ky., July, 1893.

The heart, under no circumstances, can send into the aorta and its distributing branches more blood than it receives from the veins. Paralyze the veins and keep an animal in the erect position and very little blood reaches the heart, and in consequence very little is sent into the arteries.

A blow upon the abdomen of a frog will greatly distend the veins thereof, and a great difference in the pulse will be observed by changing the position of the frog from the perpendicular to the horizontal. The same thing occurs in shock or when one suddenly withdraws a large amount of ascitic fluid or urine from a patient in the erect position. This observation teaches us to place in the horizontal position patients under these circumstances, and even to lower the head below the level in fainting.

Nutrition takes place while the blood is in transit through the arteries and capillaries and not after it has reached the veins; hence it is largely dependent upon the size of these vessels. Although a vital process, it depends upon the passage of nutrient material into the tissues through the vessel wall; after serving its purpose it is reabsorbed and passed on to the veins.

The forces concerned in securing the circulation of the blood are purely physical and obey well-known physical laws. We can gain valuable lessons as to the circulation of the blood by studying the circulation of water through the pipes and hose attached to our water mains. The height of the reservoir and the size of the delivery pipe determines the character of the flow.

It has been demonstrated that the veins are capable of holding more blood than an animal possesses; that the entire volume of blood of an animal may be introduced into the veins of another animal of the same size, without increasing tension, provided section of the medulla oblongata has previously been made. The influence of the vaso-motor centres is at least the equivalent of the ordinary volume of blood in maintaining blood tension. In other words, blood tension is better maintained under normal action of the vasomotor system than it would be without it, even if twice the ordinary volume was furnished.

Tension in the arterial system depends upon the volume of blood sent into the aorta, the force with which it is pumped and the more or less readiness with which it is allowed to make its exit through the capillaries into the veins.

To insure good work on the part of the heart it is necessary to have a healthy organ and an abundance of good blood at its disposal. Sufficient time should be allowed it for filling its cavities, and too much hindrance in its delivery not offered it. Time will not allow me to consider fully the nerve supply of this central organ. It is well-known that the heart depends upon the nerve forces governing it for the character of the work it will perform, and the especial purpose of this paper is to ask more earnest attention to blood tension as affecting the purposes it is endeavoring to accomplish. The character of the pulse should have closest scrutiny in order to facilitate the work to be done. It may be that we will thus find that the heart is fully able and abundantly willing to perform its duty, but is handicapped by difficulties placed in its way by the condition of the capillary circulation. It will be observed frequently that the heart is laboring vigorously and impatiently with over-distended cavities due directly to abnormal contraction of the capillaries, and rational medication requires us to lessen this tension rather than to further goad on a willing heart.

I admit that with our present imperfect knowledge some very difficult problems present themselves to us in the use of remedies for influencing the circulation of the blood, but we will not be aided in their solution by *blindly* using, as is the custom with some, such remedies, so potent for both good and evil, as digitalis.

Fallacies easily creep in when we begin to study the physiological action of drugs, but there are many earnest and competent workers in this department of medicine and the hope for the future is very bright. The greatest need of medicine to-day, is knowledge of the natural history of disease, and accurate knowledge of the physiological action of drugs. The day is passed for blind, haphazzard prescription writing.

I shall not undertake to even mention the names of the drugs that might be considered in connection with this subject for my sole purpose is to suggest a line of thought for discussion but, as most apt, I would ask you to consider the physiological action of digitalis and of the nitrites.

STONE IN THE BLADDER WITH A REPORT OF CASES.*

FLOYD WILCOX McRAE, M. D., ATLANTA, GA.

In treating of this subject, I shall speak succinctly of the etiology, symptomatology and treatment of stone in the bladder, purposely avoiding extensive details and references to authorities.

The chief predisposing causes—defective digestion and assimilation due to improper diet, to a preponderance of solid over liquid ingesta, or to high living coupled with insufficient exercise and imperfect oxidation. Whatever the cause, there is always an excess of the solids of the urine. These, however, are only predisposing causes, and colloids as mucus, pus, etc., due to inflammatory conditions of the urinary mucous membrane, must be present before stone in the bladder will result. Constitutional vices, such as gout and rheumatism, and the allied condition lithæmia, are important causative factors. Enlarged prostate and stricture of the urethra, with the inflammatory changes resulting therefrom, act as immediate causative factors in a small proportion of cases. The extremes of life present the larger number of cases. Males are much more frequently affected than females. The children of the poor are more subject to vesical calculi than those of the wealthy, because improper and insufficient diet and insalubrious surroundings bring about that condition of the system most favorable to the development of stone, just as we have the same conditions resulting from excessive indulgence in rich food and alcoholic beverages, coupled with insufficient exercise in the other extreme of life in the wealthier classes.

The large majority of calculi are composed of either uric acid or phosphates. The former predominate in children, and the latter in the aged. Renal calculi, foreign bodies, etc., passing into the bladder, act as nuclei and grow by accretion of urinary salts. In not a few cases the development of stone in the bladder will have been preceded by the descent of a renal calculus with its concomitant symptoms. A history of nephritic colic not followed by the expulsion of the gravel through the urethra, would naturally lead us to suspect the formation of stone in the bladder when there is subsequent irritation of that viscus.

Frequent urination, worse during the day than at night, increased by exercise, is one of the earliest symptoms. This is, in the majority of cases, accompanied by pain of a gnawing, burning character referable to the end of the penis, and which is relieved by pulling the prepuce or pressing the glans. Children thus not infrequently acquire the habit of masturbation. Boys with stone in the bladder very frequently present elongated and irritated prepuces, brought about by constant traction for the relief of the pain. Sudden stoppage of the stream during micturition—due to a small calculus having engaged in the neck of the bladder—is another of the earlier and more important symptoms. This condition is frequently relieved by change of position, so that the victim of stone in the bladder soon learns in what position the urine may be passed with the least pain and voids the urine in that position. Hæmaturia is also a symptom of some importance, especially if only present at the end of micturition and accompanied by other symptoms. Reflex pains, especially persistent podalgia, are often significant symptoms. Priapism, mucopus in the urine, etc., are of minor importance.

None of the symptoms thus far enumerated are pathognomonic of stone in the bladder Only when the stone can be felt by the searcher and the characteristic click elicted are we sure of the presence of a calculus in the bladder. Even then there are possible sources of error, such as the presence of incrustations and indurated growths. Nor is the failure to find the stone with a searcher proof that one does not exist. There are several sources of error here also, viz; a small stone behind an enlarged prostate, encysted stone, or stone contained in a diverticulum. Thus it is clearly seen that in a certain small proportion of cases, the surgeon finds it difficult to know just how to proceed. Whether it is better to operate in the face of a probable failure to find a stone, or to let th patient suffer till the suffering becomes unbearable, or a positive diagnosis may be made, is a question by which the surgeon is sometimes confronted. Where, however, the discomfort is great it seems to me it is better to operate, for usually when a stone is not found other conditions obtain that are susceptible of operative relief.

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*Read before the Georgia State Medical Association, May, 1893.

In one of the cases which I shall report further on, the symptoms were characteristic of stone in the bladder, although no stone was found. The operation, however, was a brilliant success in relieving the patient of a most violent cystitis of long standing.

In stone in the bladder, just as in most other diseased conditions, each case is a law unto itself, and must be treated on general surgical principles. The operator who wisely determines as to the best method of procedure in each individual case, other things being equal, will get the best results. Of first importance is the prophylactic treatment, i. e., the treatment of lithæmia in its various manifestations including renal calculi. Also the treatment of those obstructive and inflammatory conditions which are such important factors. As already stated, in the formation of stone I have only mentioned the prophylactic treatment, with no intention of entering upon the consideration of this interesting and important part of the subject. I have intended in this paper to discuss only the surgical treatment of stone in the bladder. Of all the methods of treating stone in the bladder none has so wide a range of applicability and so low a death rate as litholapaxy (Bigelow's operation). I have, however, had no personal experience with it, as the cases thus far presenting themselves to me were such as seemed to me were more amenable to other procedures. This operation offers much the best results except in very young children, very large or very hard stones, or where there is co-existing tight organic stricture, or enlarged prostate of such character as to prevent the introduction of the lithotrite, or where there is a violent cystitis due to the presence of a stone. For large stones associated with prostatic or vesical tumors, the high operation is undoubtedly far superior to any perineal operation. Small stones associated with stricture of the deep urethra or violent cystitis are best treated by the median operation. Nor is the lateral operation to be entirely set aside for the now more popular operations of litholapaxy and supra-pubic lithotomy. Each of these operations has its proper field of usefulness, and it is only by a careful selection of the methods of treatment that the best results are to be obtained.

Case I. Mr. F., æt. 72 years. Fat, fleshy, very flabby; weight about 200 lbs. History of bladder trouble extending over a period of five years, during which time had had two attacks of left hemiplegia. Marked cystitis existed, for which various internal and vesical injections had been used with little effect. Large quantity of pus and mucus in urine associated with blood, the latter being greatly increased by exercise. Constant felling of weight in bladder and occasional violent pains, spasmodic in character, and aggravated by locomotion. No relief from treatment. Sounding bladder failed to demonstrate the presence of stone. Operation undertaken at the urgent and frequent solicitation of patient and friends. Supra-pubic cystotomy decided upon. Operation August, 1890, assisted by Drs. V. O. Hardon and L. P. Kennedy; chloroform anæsthesia. Large phosphatic calculus (weight about 800 grs.) removed. Operation completed in usual way. Patient's condition excellent; rallied promptly from anæsthesia; no vomiting. Drainage excellent. No unfavorable symptoms until morning of 5th day, when deep coma suddenly supervened, and death resulted a few hours later. Temperature never rose above 101° F. No post-mortem. Wound in very healthy condition. Death probably due to cerebral hemorrhage.

Case II. S. M., æt. 2 years. Well nourished. History of "gravel." One small gravel removed by attending physician from fossa navicularis, a few weeks prior to operation. Retention of urine.

Operation May, 1891, assisted by Drs. L. P. Stephens, L. P. Kennedy, L. B. Grandy, and C. C. Johnson. Chloroform anæsthesia. Meatus enlarged and five small phosphatic calculi removed from anterior urethra. Sound arrested by calculus impacted in prostatic urethra. Decided upon left lateral operation, which was immediately done. Large quantity of phosphatic debris removed from bladder. No well formed calculi—so soft that they were crushed as soon as grasped by forceps. Bladder thoroughly irrigated. Subsequent history uneventful. Recovery perfect. No return of trouble.

Case III. Negro, æt. 61; blacksmith; weight 190 lbs. General condition good. Characteristic history of stone in the bladder. Operation Dalton, Ga., November, 1891, assisted by Drs. Gordon, Bivins, and McAfee of Dalton, and Warren of Atlanta. Left lateral operation; difficult on account of depth of perineum. Medium sized phosphatic stone removed entire. Weight 300 grs. Recovery excellent. No recurrence. Time of operation including sounding and dressing, 20 minutes. Enlarged prostate freely incised to make sufficient opening to allow removal of stone.

Case IV. J. D., æt. 28, St. Agustine, Fla. Vigorous. History of bladder trouble for over six months. Subjective symptoms characteristic of stone; urine full of pus and mucus. Sounding failed to elicit characteristic click, though slight grating was distinctly felt. Operation, Atlanta Medical College, February 13, 1892. Median operation. Large quantity of pus and phosphatic debris removed; bladder irrigated. No stone. Perineal drainage for ten days. Bladder irrigated twice daily with hot boric acid solution, or Thiersch's solution. Recovery perfect.

In the cases reported, I have simply stated, in the most concise manner, the histories of the cases and the results of the operation. Case I. was a forlorn hope. The probability of a good result was so remote that I should not have operated, notwithstanding the importuning of the patient and his friends. In cases II, III and IV the results were very gratifying indeed. All made excellent recoveries, are still living, and the relief afforded by the operations seems to have been complete and permanent.

SOCIETY REPORTS.

THE LOUISVILLE CLINICAL SOCIETY.

Stated Meeting, May 16, 1893.

The President, Dr. I. N. Bloom, in the Chair.

DISCHARGE OF PUS AT THE NAVEL FOLLOWING AN ATTACK OF TYPHOID FEVER.

Dr. A. M. Vance: I saw a few days ago a little girl nine years of age, with the history that thirteen weeks ago she was taken with typhoid fever; according to Dr. Rudell who is the family physician, this disease ran a typical course up to seven weeks when the umbilicus became tender, not very red but pouted a little, and about two weeks afterward a small opening occurred and a great deal of pus was discharged. The doctor treated it expectantly for four or five weeks, up to the time I saw the patient last Friday. I advised exploration and more thorough drainage. The child was in an extreme condition, having emaciated almost to the last degree, was suffering with hectic fever and was in a very forlorn condition in every way. I was afraid to give chloroform but had to do so to perform an abdominal section. An incision was rapidly made in the median line using the umbilicus for the center, and a great quantity of pus was evacuated along with solid material which I thought at the time might be fecal matter. The pus was very fecal in odor. I found the abdominal wall from the ribs to the ilium had entirely separated from the parietal peritoneum and this surface was suppurating from the opening back to the kidney region on either side. I passed my hand around on each side to discover, if possible, the source of this abscess, but could not find any perforation. The whole area was thoroughly washed out and stuffed with strips of iodoform gauze on each side. Since then the child has been very much better, eating constantly, calling for food, sleeping well, and has been very much more comfortable. To-day I found that the gauze would not drain well toward the umbilicus and I made counter openings as far around as I could reach with a probe and put in two large rubber drainage tubes to either side from the umbilicus. Drainage has been perfect since. I believe the trouble was due to a perforation of the intestine at a point where there was an adhesion to the parietal peritoneum and the pus seeking a point where there was the least resistance, finally discharging at the navel, where there possibly was a little hernial weakening.

I have never seen a case just like it; it is something new in my experience and I thought a report of it might be of interest to some of the fellows. I am convinced that there was a fecal opening somewhere, probably in the right iliac region.

DISCUSSION.

DR. J. G. CECIL: Dr. Vance's remarks recall to my mind a case of typhoid fever in a colored woman in the City Hospital, that' had a perforation of the gut; but it was never diagnosticated, nor suspected until after death and the post mortem revealed the true state of affairs. In that case we found evidences of general peritonitis but more particularly in the region of the cæcum and small intestine; wherever we found Peyer's glands there was localized peritonitis, with an accumulation of fecal matter, pus, etc. of a very offensive character. I was particularly interested at that time to know that a case of typhoid fever might suffer a perforation and yet not give any of the classic signs, sufficient at least to lead to a diagnosis. I am sorry that I cannot recall more correctly the exact facts in the case. The patient lived probably several days after the time we supposed this perforation took place. Of course not knowing that there was a perforation we could not ascertain to a certainty when it did occur but, after recalling the history of the case, it being substantiated at the post mortem, we thought probably it occurred several days before death.

The case related by Dr. Vance seems to me to be a very extreme one; he suggested the other day in private conversation that it must have been due to a perforation, and from the history of the case I do not see how there can be any other rational explanation of it.

ABDOMINAL PAIN FOLLOWING TYPHOID FEVER.

DR. J. M. MATHEWS: A young lady consulted me to-day with the following history: She is about twenty-one years of age and had an attack of typhoid fever eight months ago in the city of New York. She said that the attack was accompanied with several very distinct and large hemorrhages from the bowels; that after she made a recovery she felt a pain which was aggravated upon exercise—going up stairs or anything of that kind—continually; that she was forced to use even now an abdominal supporter; that she consulted her physician who was an eminent physician in New York, and he told her that with this history of typhoid fever accompanied with hemorrhages and with this pain that she evidently had extensive adhesions and warned her that should she have an acute attack at any time, to immediately consult a surgeon, because an operation would be necessary. The reason she consulted me was that she states if she goes one day without an evacuation this pain is set up with great intensity and she has to at once open her bowels with an aperient.

On questioning, and with a partial examination of the case, I found that she referred the pain nearly directly to the McBurney point and she gives the history of having had several distinct attacks of pain, which would indicate more or less appendicitis, and I was inclined to think, or, at least the question arose in my mind, whether or not it was not separate and distinct from her attack of typhoid fever, in other words outside of Peyer's patches; whether or not the appendix was involved, having no connection with the attack of typhoid fever. She is impressed that she will possibly need a surgical operation as she has been warned that this might be the case.

DISCUSSION.

DR. WM. BAILEY: Basing the idea of perforation upon fecal odor: Is it not possible, owing to the thinness of these structures, to have a fecal odor without perforation?

DR. A. M. VANCE: Yes, I think this is quite possible, and may have been the cause of the fecal odor in the case I reported, but there was considerable material looking like fecal matter in the right iliac fossa. There is one point I failed to mention in the history: I gave the child a purgative the day after the operation and she had several large evacuations, and my attention was called to the peculiar character of them, looking like they were filled with thousands of little bodies; the whole mass seemed to be filled with little worms. I could not make out what it was at first, but finally came to the conclusion that it was the little fibres of banana that go from the center to the periphery of the banana. The child had eaten a great quantity of bananas even the day before the operation.

CONTINUED REPORT—INTUBATION FOR PAPILLOMA OF LARYNX.

Dr. Wm. Cheatham: I want to make a continued report of a case of intubation; a child about three and a half years old which I had to tube for papilloma of the larynx, making pressure and thus hoping to produce absorption. The child has worn the tube since September last, having been changed three times in the meantime. The father telephoned me the other day that the child had coughed the tube out, and I asked him to bring the child to my office. He did so and gave me the history that the child dropped in the back yard as if in shock, and the mother found the tube partially out and pushed it back; I found the tube in position, but turned half around. Could not get it out with the extractors. . I had to milk it out by putting my right fore finger in his mouth and placing left thumb below tube on larynx by firm pressure up and back. I finally succeeded in getting it out. This was last Monday and the child has not had to have the tube inserted since and the breathing has been perfect without it. It is marvelous how these little ones get used to the tube. In removing this tube I did not have to use a gag to hold the mouth open. He held his mouth open each time and allowed me to use the extractor without any trouble.

I have two cases on hand now of paralysis of the left recurrent laryngeal. One of them interested me a great deal in which there was at first paralysis of the recurrent laryngeal, which supplies the abductor and adductor and the arytenoid muscle. Some gentleman has taken this nerve and dissected the three fibres, showing them separately. This case had adductor paralysis at first, the cord being firmly contracted and drawn over to the left. He did not know what was the cause at first but later it has been found that he has an aneurism of the aorta. His voice was exceedingly bad, he was very hoarse, as is usually the case with adductor paralysis. In the last few days he has improved very much. Upon examination I found complete paralysis of the left vocal cord; it having taken the cadaveric position, the right cord now does not have to go over so far.

In the other case of paralysis of the left recurrent I have not yet been able to make out any cause. I have also a young lady with paralysis of the arytenoideus muscle, with loss of voice six months. I do not know whether it is a case of hysteria or not. She has menstrual trouble. I have not been able to find any local cause for the paralysis.

MILK SUPPLY OF LOUISVILLE.

Dr. J. M. Mathews: I thought this evening would be an opportune time for a discussion upon the question of the milk supply of Louisville in connection with the epidemic of typhoid fever. There are two or three points that I would like to have the members consider.

First: Whether or not it is a recognized fact that water and milk are agents or vehicles for communicating the germ that produces typhoid fever.

Second: Whether there is a specific germ causing this disease, and if not how much do we know about the cause of typhoid fever in this connection?

Third: Recognizing that there has been an epidemic of typhoid fever in this city, whether or not the circumstances surrounding this epidemic and the investigation made by the State Board of Health was warranted.

Fourth: How should an examination of this kind be conducted?

We must all recognize that there has been and is now an epidemic of typhoid fever, as I say, in the city of Louisville. In one certain district, as Dr. Bailey will tell you, there are upwards of forty-five cases suffering from the disease who are or have been taking milk from one certain dairyman. I would like to hear an expression from the general practitioner and bacteriologists as to whether there is a suspicion correctly founded or not, and if so should it not have been investigated in the manner that it has? The reason that I have presented this questien to-night is simply this: That the daily secular press of Louisville in its energetic, not to say sensational way, has brought the subject so prominently before the profession and the people that some impression should be made upon them that is scientific and correct. We know how easily the laity are led away by articles in the daily press and we also recognize the fact that if they are led away in the wrong direction, that it is possible it might create a great deal of harm. Not being a bacteriologist myself, nor a general practititioner of medicine, I leave it to the members of the Society to discuss this question. I would like to hear from Drs. Bailey and Vissman as to the proceedings up to date, because I find the profession of Louisville are greatly interested in this matter. We must, as physicians, be given credit for trying to take money out of our pockets; recognizing as we do the cause of typhoid fever, we go to work trying to prevent the cause, yet the press are disposed to make light of us sometimes in our effort to prevent the disease.

DR. WM. BAILEY: I would like to say that I have no further report to make, as I have not pursued any further investigations since my report to the State Board of Health, which you were kind enough to adopt in the minutes of the last meeting in lieu of the remarks I made at that time.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, June 9th, 1893.

THE PRESIDENT, Dr. T. L. McDermott, in the Chair.

SYPHILIS IGNORANS.

DR. A. M. VANCE: I first saw this gentleman two years ago, at which time he had a suppurating condition of the left elbow joint following incision of the joint by Dr. Sloan, of New Albany, Ind.; the patient also had a number of suppurating points about the body, one in each armpit and I think one upon the thigh. He was considerably more run down generally at that time than he is now, and I took it to be a case of syphilis ignorans, he not knowing of having any primary lesion. I put him upon anti-syphilitic treatment which was followed by no improvement. I then gave him a constructive line of treatment; this was followed by some improvement in his general health, but there was no change for the better in the suppurating condition. After about a year the right elbow became affected; the arm pits never healed and I then put him in the St. Joseph Infirmary and scraped out every place that was in a condition of suppuration or open. At that time the elbow was perfectly flail-like in its action, no power at all, but since the operation he has gotten considerable power. I have been very much interested in the case because I could not determine just what the diathesis was; I do not think it is tuberculous. I have always had the suspicion that it is specific, but there was no improvement under the usual active treatment by the various methods—mercury was given first, afterwards large doses of iodide of potassium. An immense amount of broken down material was scraped away, and there has been considerable improvement in the last year. At no time during this period has he been compelled to quit his work, except for two months when I advised him to quit and go to the country. There is absolutely no history on his part of a primary sore, and no history of tuberculosis in the family.

DISCUSSION.

DR. E. R. PALMER: I do not think Dr. Vance's reasoning that because the patient is not emaciated is against the idea of tuberculous trouble. I often see tuberlous glands of the groin in persons of a lymphatic temperament, who are apparently well nourished and in robust health.

DR. WM. BAILEY: Have the discharges ever been examined microscopically?

DR. A. M. VANCE: No.

DR. T. L. McDERMOTT: I have a case under observation at the present time, whether it is similar or dissimilar I cannot say. I have had two cases of multiple abscess, whether specific or non-specific I do not know, one of which was extremely interesting. He had been treated by many of the most prominent physicians of Louisville, including Drs. Cowlings, Crow and Yandell. Dr. Frerick had made an incision and scraped out the abscesses, also removing several pieces of bone. This patient had abscesses upon different parts of the body at different times. I was taken to see this man and prescribed elixir iodo-bromid calcium Co., not with the idea, however, that it would particularly benefit him, as it was strictly a surgical case in which I was not interested. I was greatly surprised about two months afterward to see the patient get out of a buggy and hobble into my office on crutches after he had been in bed about a year; after he had been to Europe and consulted some of the most eminent surgeons there and spent a fortune in doctor's bills in his efforts to get relief. He continued to improve and eventually became entirely well, not having an abscess since. Whether there was any virtue in the medicine, or whether the time had simply come when nature had removed the cause of the trouble, I am unable to say.

I have another similar case now. Dr. Roberts has seen the patient with me and I am sorry he is not here to-night. Some of the joints have become ankylosed as the result of abscesses, and abscesses have also appeared in other parts of the body. We cannot find any specific history. I have put him upon the same medicine, and although he is an aged man and broken down, the abscesses are healing. In the first case I did not believe the abscesses due to hypodermic injections.

Dr. A. M. Cartledge: This does not have the appearance of tuberculous trouble to me, and I am not inclined to look upon it as tuberculous in character. I think it is probably syphilitic.

Dr. A. M. Vance: I saw the case Dr. McDermott speaks of (first case) and I think one reason the abscesses never healed was owing to the hypodermic injections given by one of the physicians who treated him; certainly the abscess I saw was due to an unclean hypodermic.

PATHOLOGICAL SPECIMENS — INCARCERATED TESTICLE—STRANGULATED HERNIA—OPERATION.

Dr. A. M. Vance: This specimen is a testicle removed some time ago; my reason for not reporting the case earlier is that I have not seen Dr. Irwin present at any of the recent meetings, and as he was connected with the case I have waited until he attended one of the meetings. The patient was a man sixty-two years of age; Irish, and a great many years ago, when he first came to this country, he gave the history of pain in the region of the right groin to Dr. Coleman Rogers, who advised him to wear a truss in anticipation of a hernia. Dr. Irwin was the attending physician in the case for some time prior to the incarceration of this hernia, which took place the day I was called. At eleven o'clock Dr. Irwin was called and found a large hernia of the right side descended and could discover this testicle in the lower portion of it. After some difficulty he reduced the whole mass and told the patient to hold his hand on the ring until he (the doctor) could go after a truss. When he returned a smaller mass was present at the site of the hernia which he could not reduce completely, though it seemed to be easy to make it less in bulk. I saw the patient the same night at eight o'clock. We put him to bed and advised rest until the next day. There were no active symptoms of strangulation or of obstruction at that time, and we advised him to call us in the night if he had any trouble. He was a very eccentric man and did not call us during the night, though we learned he complained of severe pain. We saw him at nine o'clock the next morning and from the aggravated symptoms we decided there was obstruction and advised immediate operation which was consented to, but he would not go to the Infirmary, insisting that the operation be performed at his home. We opened the sac and found nothing but serum in it, quite a quantity of fluid also came from the cavity through the hernial opening. I enlarged the opening, practically making a laparotomy of it, and found that a coil of intestine, probably eight or ten inches, was strangulated, the strangulation being produced by slipping of the gut through the opening between a band and the testicle. The testicle was in the abdomen with this coil of intestine. The intestine was quite red, though after relief of the constriction it returned to normal color. I removed the testicle and did a radical operation for the hernia. The man further showed his eccentricity by driving away the attendants we placed over him until we could get a professional nurse, getting up and walking about the room, getting on a vessel and having an evacuation of the bowels, etc. On our next visit we found him in collapse and he died at midnight same day of the operation. I take it that owing to his having gotten up and moved about, the ligature slipped, when hemorrhage took place, or there was some other cause for the great shock, as the operation was very satisfactory and it seemed that the man had every chance of recovery. No post mortem was held.

INCARCERATED TESTICLE — HERNIA — OPERATION.

This testicle was removed from a boy ten years of age for a condition similar to the case just reported, without the strangulation. The testicle was removed and radical operation done for the hernia and the boy made a good recovery.

SARCOMA OF HEAD OF TIBIA—AMPUTATION.

Here is a very interesting specimen to me. The patient was a girl about fifteen years of age; a robust healthy looking subject, who had the first symptom of trouble about the knee joint March 1st, last. I saw her a week ago with Dr. Krim. There was a large tumor occupying the inner side of the leg beginning at the epiphiseal line of the tibia and extending down several inches, with history of having rapidly grown. There was no elevation of temperature and the only trouble experienced was pain of an acute character; there was no fluctuation in the tumor. I was of the opinion that it was a rapidly growing sarcoma of the head of the tibia, and advised an incision and if this was proven to be the case, or if there were other conditions to prevent conservative treatment, to amputate. After some procrastination incision was consented to, Dr. Yandell having seen the case in the meantime and agreed with me in the procedure. I made an incision and found the periosteal structures very thick, the bone completely denuded, and the whole interior occupied by a soft mushy mass. This thinning out had taken place so thoroughly that spontaneous rupture of the tibia might have occurred without any great effort. After removing the mass and finding that the tibia was involved for fully six inches, I amputated the leg just above the knee. Patient has done well since the operation. Microscopical examination (by Dr. Frank) proves the trouble to be large round cell sarcoma.

REMOVAL OF BREAST FOR TUBERCULOUS CONDITION.

The last specimen is the breast of a woman twenty-five years of age, which I removed for tuberculous condition. She gave birth to a child two years ago and an abscess occurred and has remained open constantly; that is, whenever one opening would close it would re-open at another nodule, irrespective of the former sinus. You will notice that there are a number of nodules occupying the breast. Recovery has been uneventful except that the patient had secondary hemorrhage.

DISCUSSION.

Dr. J. W. Irwin: Referring to the first case reported by Dr. Vance: I think it is proper I should make a statement, owing to some misunderstanding that has arisen as to the conditions which were operative in causing this man's death. (I refer to Mr. J. D. O'Leary). He was a rather singular gentlemen; he had been under my care six months for another trouble. Dr. Bailey saw him once in consultation with me while he was suffering from an affection of the bowels. I discovered two weeks before his death that he had a hernia and advised him to wear a truss. He would not be persuaded that a truss was necessary from the fact that he said he had had the hernia all his life and had never worn "one of those things"; that the hernia came out during the day and went in at night. I assured him that all forms of hernia were dangerous; that some time the bowel would come out and could not be replaced, that this was the rule. The hernia might come out a great many times and be reduced but would eventually come out once too often. He insisted that he would not wear a truss. When the rupture took place I cannot say, but it must have been the night before I saw him. I saw him at eleven o'clock the day before he died and discovered the hernial protrusion. He was in great agony, with all the symptoms of gastric pain, etc. I found a protrusion the size of a double fist, a great part of which was serous. After considerable trouble I was able to reduce it completely, and after reduction he was entirely relieved of pain. I left him lying flat on his back on a couch and instructed him to hold his finger over the opening to prevent the bowels slipping out again, while I procured a proper truss. He still insisted that he would not wear a truss but I left to get one and soon afterward returned to learn that he had gotten up and walked about the room, removing his finger from the opening, when the hernia came out again, but not to the same extent as before. I found him again in great pain and tried to reduce the hernia, but it was impossible to do so the second time. I then suggested that Dr. Vance be called, which was done and we made another effort to reduce it. We finally came to the conclusion that the obstruction was due to a retained testicle in the canal preventing reduction. In fact the diagnosis made by Dr. Vance and myself was so accurate that after the operation we found exactly the condition existing that we had stated would be found. The operation I want to speak of as being one of the most cleanly and at the same time one of the most conservative that I have ever seen. It would be safe to say that Dr. Vance removed at least two feet of the intestine, or more, through the opening before he relieved the constriction. He made quite a large opening, really a laparotomy. I do not believe the patient lost in all over a half teaspoonful of blood, the operation was done so carefully and so well. The patient did well after the operation as long as he remained in bed, but tried to persuade all of us, even Father Brady, the Priest, that he did not need a nurse. He further said that he had decided not to allow a nurse to be employed, and that he knew what he was talking about and would show us that he would have his own way just as he had refused to go to the Infirmary to be operated upon. He afterward drove Dr. Rice away, who had been left there to nurse him for a short time, telling him, I believe, that he did not need his services any longer. Mr. Faulds was then allowed to remain with the patient until I could return with a trained nurse which I had been looking for and had in view. The patient in order to show that he did not need a trained nurse, got out of bed, had an evacuation of the bowels and walked over to the window, sat down in a chair and looked out, went back to bed and soon after got up again. When we called at five o'clock or a little after, we found him, as Dr. Vance has said, in collapse, and ten minutes before twelve o'clock he died. There was nothing in the case, up to the time he got up and walked about, that would indicate anything else than that he would make a good recovery. I do not think his death was due to the operation at all, but believe it was due wholly to disobedience. I told the priest this at the time, and he agreed with me because he said the patient was a man self-willed; though gentle in his manner, he was determined to have his own way when he could. In this instance he did have his own way and he died.

Dr. A. M. Cartledge: The character of the obstruction makes the case a very interesting one to me. It only proves that in these old cases of hernia where there is an undescended testicle, it is impossible to tell the character of the obstruction until operation is performed.

The tibia case is also one of extreme interest. But for the microscopist's revelations I should be inclined to look upon the case as one of osteitis with its starting point at the head of the tibia. I believe that this, like a great many of cases we formerly looked upon as tuberculous, might be secondary osteitis grafted upon an osteo-sarcoma. In other words, the trouble being originally sarcomatous in character. We ought to have more of them examined by the microscope.

Dr. A. M. Vance: My idea of rapidly growing sarcoma was based upon the fact that the whole thing grew in three months; twelve weeks ago the patient was perfectly well, no fever, and while the pain was severe there was no evidence of fluid or breaking down. Very little fluid was found at the operation, and this was probably pus or some product of the sarcoma.

PECULIAR CASE OF APPENDICITIS.

Dr. A. M. Cartledge: Last Tuesday evening at eight o'clock I was called to see a patient in consultation with a physician, who gave the following short history of the case. Sunday morning he was called to see a boy who was taken with pain in the abdomen and diarrhœa, getting up very often, straining and having some small fecal evacuations; vomiting came on Sunday evening which he said was uncontrollable by all ordinary means. Sunday evening he concluded he would try ten grains of calomel; this quantity was given the patient which arrested the vomiting. On Monday morning he again visited the patient, some little nausea was present and slight tendency to vomit. He tried bismuth and carbonate of soda, etc., and during the day, Monday, he resorted again to the use of calomel with Dover's powder, which put the patient to rest again. On Monday three injections of water and glycerine were given which failed to move the bowels. Tuesday morning the temperature was 102° F., abdomen considerably swollen and he ordered some salts; vomiting continued, and another injection—a very high enema—was given without any result. On Tuesday evening he came to me with the statement that he had just left the patient with a pulse of 150, persistent vomiting with an incessant desire to get up and stool. I told him I thought it was a case of intussusception from the history given. I saw the patient about eight o'clock, found the abdomen greatly distended, pulse not as rapid as stated. I made it 132, and the boy's condition was indeed a very grave one. Vomiting was projectile and stercoraceous in character and I gave it as my opinion that it was probably a case of intussusception and advised immediate section. I returned to the city to get my instruments to do a laparotomy and at twelve o'clock the operation was performed. When the peritoneal sac was opened a great amount of fetid pus was evacuated; it welled up as soon as the incision was made and seemed to originate in the right iliac fossa. The intestines everywhere were matted together, and inflated with gas, each loop that came out showed evidence of adhesion to the loop that came in contact with it. Peritonitis was advanced. I found a mass in the right iliac fossa of considerable resistance, and upon drawing it up discovered that it was a portion of intestine constricted as though a band had been passed around it. After working in this region for some time I fished up this little enterolith, and soon found the vermiform appendix which had ruptured, showing that the original cause of the trouble was in the appendix. The appendix and this enterolith were carefully removed. Evidently the appendix had ruptured early in the attack and nature had thrown out a wall of lymph as a protection against infection of the general peritoneum; then this band of omentum had produced secondary obstruction as well as the original peritonitis. Several gallons of water were used in irrigation, and I determined if I had another case of diffuse advanced peritonitis I would put in three drainage tubes; one in the right iliac fossa, one in the left and another in the center. Three were used in this case, drainage was profuse. The patient was placed in bed in fairly good condition, but died the following day at twelve o'clock. I think the case an interesting one, illustrating another phase of the appendicitis subject. It seems that there is a never ceasing line of complications in these cases. Here was a typical history of intussusception, barring the tumor, which we were unable to discover owing to the tympanites, when the facts in the case prove it to be appendicitis with rupture and an enterolith in the cavity.

APPENDICITIS.

This is another vermiform appendix removed from a patient about the same age as the one just reported; operation done eight weeks ago. The patient was thought to have typhoid fever; he had a well defined tumor in the right iliac fossa. I operated without opening the peritoneal cavity and found about half a teacupful of pus. The cavity felt quite smooth at first, but in putting my hand down to the bottom of the pus cavity, I found the appendix and discovered that it had ruptured, the opening being a very small one. I made a little traction on it, passed a ligature around and tied it off. The boy made an uninterrupted recovery and was on the streets in twelve days entirely well.

AMPUTATION OF LEG.

Here is a specimen of extreme interest to me, being some blood vessels removed yesterday afternoon. Dr. Vance assisted in the operation. I was called yesterday afternoon to see a young German of powerful physique with this history: Last Monday while at work throwing beer kegs upon his wagon, he was seized with numbness of the right leg, almost unable to stand up, and suffered with burning sensations in the bottom of his feet. A physician was called and thought it was paralysis, and he was treated with this idea until I saw him yesterday. I found a German about twenty four years of age of enormous physical development; the leg was cold and lifeless from about 4½ inches below the popliteal space down, no circulation at all; there was already discoloration and evidences of gangrene taking place. The posterior surface of the leg had a peculiar feeling, indicating possible rupture of the tibial. I examined the heart and it was a peculiar one. No valvular murmur could be detected, yet it was a very restless and irritable heart. There were no evidences of fever; temperature 99°F. There were no indications of a rheumatic condition of the heart, though he gave the history of having suffered a severe attack of rheumatism in early life. From the fact that gangrene had already begun, and the apparent lifeless condition of the limb, it was amputated between the knee joint and the thigh. We found very little blood even after the Esmarch was removed. Another strange thing was that the femorals did not pulsate either before or after operation. After getting the patient to bed, Dr. Vance and myself opened the leg posteriorly, and found just at the junction of the tibials a thrombus, although in slitting up the vessels along the posterior part of the leg we did not find anything looking like an embolus, but just these little casts which had obstructed the posterior tibial. The vessels seemed to be thickened on that side and the question is whether it was an embolus from the heart primarily, or whether an endarteritis causinglocal thrombus. Another question is, owing to absence pulsation of the femoral, whether there is of not a higher obstruction in the vessel and the patient will have the same trouble further up. His temperature this morning was 102° F; to-night it is 100°F; pulse 88, and patient resting comfortably.

SECOND OPERATION FOR CARCINOMA OF THE BREAST.

The next specimen is a tumor of the breast removed to-day from a woman fifty-five years of age. One year ago this patient was operated upon for tumor of breast, and recurrence was very speedy in the line of incision. I take it that orignally there were no enlarged lymphatics in the axillary region, as the axilla was not opened at the orginal operation; in fact there was very little evidence of axillary enlargment, but at the operation to-day there were several enlarged glands in the axilla. I do not think all the gland was removed originally. In the operation to-day the axilla was thoroughly cleaned out and all suspicious tissue removed.

I report the case especially from the fact that I believe I removed more skin than I have taken out in the removal of any breast; nearly the whole of the pectoralis major muscle was removed, as it was all included in the tumor. So much skin was taken away that of course no effort could be made at approximation. I did insert a few sutures but the majority of the wound was left to heal by granulation and will have to be treated as an open wound. Dr. Vissman was present at the operation and with the microscope made several rapid sections of the skin in order to determine when sufficient was removed to get beyond the malignant trouble. This method is practiced largely in Germany and I believe the microscope can be used in this way to good advantage. The patient reacted very nicely, pulse 100 at close of the operation. The trouble was pronounced by Dr. Vissman carcinoma.

CONTINUED REPORT.—TUMOR IN EPIGASTRIC REGION.

Dr. A. M. Cartledge: You will remember this patient was before this Society about four weeks ago; was examined by several of the members present, on acof a tumor in the epigastric region. Several thought the trouble a distended gall bladder, others abscess of the liver. After making an examination at that time, I stated that I did not think it was abscess of the liver. The next day I made a further examination and came to the conclusion that it was a cyst of the pancreas. The day following I performed a laparotomy, following out the idea of pancreatic cyst, making my incision in the median line. After investigating through the incision, I found the case to be unquestionably one of abscess of the liver and about a half gallon of pus was evacuated. I cleaned the cavity very thoroughly and inserted a very long drainage tube after packing the cavity with gauze. The patient has made an uninterrupted recovery; the liver is now about normal in size and the wound has closed with the exception of a very small sinus about a half inch deep.

J. Morrison Ray, M.D. then read a paper on

SOME DISEASES OF THE GRANDULAR TISSUES AT THE BASE OF THE TONGUE—SO-CALLED LINGUAL TONSIL.

Surrounding the upper respiratory passage is to be found a number of accumulations of grandular tissue to which have been given the name of tonsils.

Starting in the vault of the pharynx as an aggregation of lymphatic tissue, under the name of Suschka's gland or the pharyngeal tonsil, it extends on each side toward the orifice of the eustachian tubes, thence as a chain of submucous lymphatics down on each side to the space overlying the superior constrictor muscle, between the palato-glossus and palato-pharyngeus, the so-called pillars of the fauces, where it again becomes aggregated into the faucial tonsil. From these it extends down the lateral walls, between the divergence of the faucial pillars, toward the base of the tongue, where it again aggregates into lymphoid bodies that more or less fill the gloss-oepiglotidian fossa, and thus completes a grandular circle around the pharynx. Some have traced it still further, even into the ventrices of the larynx, where it may form a recognized enlargement.

The pharyngeal and faucial portion of this ring are found in their highest state of development in childhood, and, if they have never been the seat of inflammatory change, diminish in size as the age of puberty is attained, soon after which they disappear altogether, or present slight elevations marking the base of the original gland. That portion situated at the base of the tongue occupies the space behind the circumvallate papillæ, and in front of the attachment of the epiglottis. In the normal state it is observed best by the aid of the laryngeal mirror, yet I have encountered it so enlarged as to be seen by strong depression of the tongue, accompanied by efforts at gagging. With the laryngoscope this tissue appears as a number of elevations scattered in an irregular manner over the tongue, and extending over toward the lateral glosso-epiglotidian folds, with here and there veins of considerable size showing themselves as dark blue lines coursing between the lymphoid collections.

Unlike the faucial and pharyngeal enlargements of the lingual tonsil, it generally shows itself in adults. The cases I have seen were between nineteen and twenty years of age—the majority females.

Anatomically these glands are identical with the pharyngeal tonsil, consisting of accumulations of lymphatic tissue covered with mucous membrane, with here and there, on the summit of the elevation, depressions that mark the opening of the crypts or follicles. When excessively enlarged it represents two lateral masses, separated by the median raphe of the tongue, projecting forward so as to lie in contact with, or even overhang, the epiglottis. Generally, however, we see a number of masses irregularly placed. Within recent years considerable attention has been drawn to this region as the seat of annoying and often persistent discomfort.

Lennox Browne first called attention to a varicose condition of the veins in this locality, giving rise to symptoms of *globus histericus*. He states that there is frequently concomitant evidence of a varicose diathesis, such as rectal hemorrhoids, varicocele, or varicose veins of the extremities.

Rice and Curtis have reported cases of persistent cough and loss of the singing voice, due to hypertrophy of the glandular tissue. I have seen cases showing varicosity of the superficial veins in this locality, and a number presenting more or less enlargement of the glands. All such cases have not, however, presented symptoms referable to the part, and have improved without treatment of the base of the tongue. A few others I have seen wherein the condition was so very marked that the symptoms pointed so distinctly toward this region as the offending area as to make the indication for treatment unmistakable. The symptoms usually complained of are a sensation as if there was a foreign body present, with accumulations of excessive quantities of mucus and saliva and usually considerable cough.

These cases are frequently neurotic and dyspeptic subjects, who have been told they were suffering from catarrh or incipient phthisis.

I can best illustrate my subject by relating a few of the well-marked cases I have observed.

Mrs. R., age thirty-nine, wife of a minister from the southern part of the State, consulted me in 1891. She said that she had been told that her trouble was catarrhal, but her family feared tuberculosis, since a sister had died two years before, at about her age, with this disease. At the commencement her symptoms resembled those she had had for the past few months—these were a cough, a sense of fulness, with excessive saliva and constant desire to swallow, with a raw, burning sensation low down in the throat (this symptom she emphasized by placing her finger on the neck corresponding with the side of the larynx); her voice was husky, and easily fatigued; she suffered from constipation and dyspepsia, and attacks of eructations from the stomach. On examination the pharynx appeared red, congested, and contained a number of enlarged follicles, no enlargement between the faucial pillars; the nose and naso-pharynx were well open, and the turbinates gave no evidence of contact or pressure. The laryngeal mirror showed the larynx healthy. The lower pharynx was much congested and red; the base of the tongue presented a quantity of hypertrophied gland tissue; this was irregularly distributed—on one side a mass hid the epiglottis. The diagnosis I made was enlarged lingual tonsil, with pharyngitis, the latter probably due to the pyrosis.

I ordered a cleansing solution for use in the atomizer, and gave internally a laxative pill and lactopeptine, with bismuth. She left for home in a few days, feeling better. This continued for a short while, when I advised the use of dilute nitromuriatic acid. Under this the regurgitation from the stomach was relieved, and the soreness in the throat disappeared. Two months later she returned,complaining of the fullness, cough, and excessive saliva. Skin being pressed, the pharyngeal redness was much less, but the base of the tongue still presented enlarged tissue. I determined on surgical interference. Painting the parts with a ten per cent. solution of cocaine, I removed several masses of gland tissue by means of curved scissors and a pair of post nasal cutting forceps. One piece that overhung the epiglottis was as large as a hazel nut. Some bleeding followed that was checked by hot water held in the mouth and allowed to be slowly swallowed. A few days later a few tags were noticed, making the surface rough; with the galvano cautery I destroyed these. The throat was very sore for several days, and I was unable to do more during her limited stay. I ordered a tannic acid and listerine gargle, and advised a continuance of the internal treatment. She wrote me about three weeks afterward that the soreness slowly disappeared, and with it the sensation of fullness and the accumulated saliva, and that the cough was better.

Mrs. X., age twenty-five. I saw her three weeks ago. (Her case suggested to me this paper). She complained of having been hoarse nearly all winter, and with it a disagreeable tickling sensation that caused much cough. Recently she had much family sickness and anxiety, since which the throat was worse, and felt full, with a constant desire to swallow. On examination the nose and upper pharynx looked comparatively well; the larynx showed thick, reddened cords; the inter-arytenoid space was roughened and covered with partially dried mucus; the base of the tongue showed three enlarged lymphoid bodies—one, the size of an almond, pressed firmly against the left edge of the epiglottis. I cauterized these well with galvano cautery, and ordered steam inhalation, and an alkaline solution for the atomizer, to be drawn well down into the larynx. I have not seen the patient since, but understand the throat was quite sore for a week, but since the voice has improved and the fulness in the throat is less.

These two cases are the only extreme ones I have met. An example of a less severe one is the following:

Miss M., age nineteen, was referred to me by a well-known vocal teacher of this city, with the statement that her head notes were bad, and her voice easily tired. The teacher had seen one case where I was able to improve the head notes by relieving a turbinated hypertrophy, and she suggested to this young lady that she probably had some nose trouble. On examination, the nose was found free of hypertrophy or septal deflection, and the larynx was normal. I could, therefore, give no satisfactory explanation of her condition, but suggested treatment of the larynx by astringents with a brush, hoping that, by toning up the mucous membrane, an improvement would follow. On examination, preparatory to making an application of zinc chloride to the larynx, I noticed the base of the tongue. It appeared rougher than in health; a number of lymphatics appeared enlarged, and the mucous membrane congested. One gland was particularly enlarged, and the follicle on its surface contained a small whitish concretion. I decided to destroy this gland, and try treatment to this locality rather than to the larynx. I applied cocaine, and with the galvano cautery I destroyed this gland, the seat of chronic follicular disease. It was sore for only a few days. After this I applied, at three sittings, Lugol's solution and glycerine, after which the treatment was discontinued. Soon afterward I was informed that her voice had improved, and was not so easily fatigued.

I have treated a number of cases where the gland was more or less enlarged, without any improvement in the symptoms of which they complained. The three cases were reported for the purpose of showing the undoubted existence of a morbid condition in this locality that was remediable. I have had but little effect from alterative and astringent applications, and gargles do not reach to the locality.

I am convinced that cases do frequently occur, both of acute and chronic follicular disease, yet but slight reference can be found in literature to such a condition. I have recently encountered two cases of acute follicular inflammation of these glands—one, a negro, was in my dispensary service. The second case, Mr. G., had suffered for several days with some pain in swallowing, and it had been diagnosed rheumatic sore throat, and given anti-rheumatic treatment, but his throat had not improved. When I saw him there was no evidence of an acute process in the pharynx or fauces. On using the laryngeal mirror I noticed the base of the tongue on the left side was red, and covered with several follicular exudates.

The glosso-epiglotidean fold was edematous, and when the part was touched with a probe acute pain was elicited. Prompt recovery followed a few applications of iodo-tannin solution. There is no reason why these glands should not be subjected to the same forms of disease as affect the faucial and pharyngeal tonsil, such as accumulation of concretions, mycotic disease, etc., but they are often overlooked in searching for the cause of a throat trouble.

DISCUSSION.

Dr. S. G. Dabney: A great deal has been written in the last year in regard to the fourth tonsil. One of the most common symptoms of trouble in this locality is probably what is known as "empty swallowing" an inclination on the part of the patient to swallow when there is really nothing to swallow. I have seen a good many of these cases. I have one case just now in this city, a gentleman who has this condition in a very aggravated form, and who has recently been operated on for rectal hemorrhoids. My experience is that there is nothing better than the electro-cautery for the treatment of conditions of this kind. We often find dilated vessels with the glandular enlargement—a condition to which Lennox Browne has given the name of lingual hemorrhoids. There is one symptom I have seen often, which was not mentioned by Dr. Ray,and that is a little spitting of blood in the morning from the breaking of one of these enlarged vessels. Why it happens that this usually bursts during the night I do not know. In a recent number of the *Philadelphia Medical News* I reported several cases, one of which was especially interesting in this connection. It was that of a young lady who had long been troubled by cough and suffocative feeling, seeming to originate in the left side of her throat and occurring just after going to bed. Nose, naso-pharynx and larynx were normal, but at the base of the tongue and slightly catching the epiglottis was an enlargement of the glandular tissue. Destruction of this with electro-cautery gave entire and permanent relief from cough and other symptoms. In most cases of enlargement of the so-called lingual tonsil relief follows application of the electro-cautery and there is no return of the trouble. I do not think the local application of astringents are to be relied upon in such cases, if the hypertrophy is sufficient to cause any serious symptoms my experience has been that little good can be accomplished by any local medication. I believe what holds true in so many parts of the body is applicable in cases of this character, that the affection in many persons gives rise to no unpleasant or serious symptoms, while in others very disagreeable effects are produced. This may be one reason why we see so many ladies suffering from affections of this nature, the same conditions in robust men not producing any disagreeable symptoms, that is not sufficiently marked to be noticable.

DR. W. M. CHEATHAM: I have seen a great many cases of the character described by Dr. Ray in his paper. Concerning the question brought up by Dr. Dabney as to why so many slight hemorrhages occur during the night: Possibly it is owing to the fact that the blood vessels contract during the night. Theoretically we would suppose they would occur in the day time when the body is more active, the heart beating stronger and the blood being driven with more force, but my experience has been that the hemorrhages occur more frequently at night. I have used the galvano-cautery in the treatment of these conditions, and occasionally use a tonsillotome and sometimes scissors, but depend more upon iodine than anything else. When forceps or scissors cannot be used I resort to galvano-cautery. The symptoms are sometimes remarkably distressing, but are usually relieved a short time after the operation. My experience is that less inflammation follows the use of the galvano-cautery than any form of surgery. Indications for treatment here are about the same as in inflammation or hypertrophy of other tonsil tissue; at times local medicinial applications give relief, then again surgery alone is indicated.

DR. C. SKINNER: I would like to ask Dr. Ray if he has ever noticed that iodine used as a gynecological application had any effect upon the voice. The reason I ask the question is that last fall I treated a young lady, in the city, a professional singer, using iodine once or twice, and her voice did not get over the effects of it for two months.

DR. J. M. RAY: I would say in reply to Dr. Skinner's question that we frequently find throat trouble to be the result of uterine disease. A well-known Philadelphia laryngologist claims to be able to look into the throat and diagnosticate various forms of displacement about the uterus by an examination of the larynx. The question of spitting blood, etc., was not mentioned in the paper because this symptom was not present in the cases I reported, although such a condition is often found and made a prominent diagnostic point by the text books. A point I wanted to make particularly in the paper was in regard to acute inflammation of this gland, you often find a condition resembling acute follicular inflammation of the faucial tonsil. I have seen several of them. Upon looking into the pharynx it appears to be in a healthy condition, yet the patients complained of persistent pain on swallowing. I have treated two or three such cases without thinking of the base of the tongue, and no relief has followed. In others I have treated the base of the tongue and found prompt relief. I believe that often cases of acute sore throat are really acute inflammations of the lingual tonsil. In fact I see no reason why acute follicular disease should not be as common in this locality as it is in the fauces and naso-pharynx.

AN UNUSUAL CASE OF TRIPLETS.—The newspapers report a case of triplets in Nyack on the Hudson, which seems to be one of the most remarkable on record. There were two males and one female, and their aggregate weight was fifteen pounds. The two boys were bound together with a band almost precisely like that in the case of the Siamese twins, while the girl was joined to one of the boys by a band passing from the hip of the one to the hip of the other. The children survived for seven hours after birth. When the death of the girl and one boy had occurred an effort was made to save the life of the third child by cutting the ligature binding him to his brother, but it proved ineffectual.

DERMOID CYST OF THE LUNG.—A case is reported from Vienna, of a dermoid cyst of the lung. The tumor had its origin in the mediastinum, and after involving the lung ruptured into one of the bronchi, the hairs being coughed up in the expectoration.

CORRESPONDENCE.

To the Physicians of Pennsylvania.

Brethren in the Profession: I am a graduate of Jefferson Medical College, Class of 1890. I located in Noxen, a country town just springing into existence. There was no drug store within ten miles, consequently I was compelled to keep a large assortment of drugs for my own use. I soon developed what might be called a pretty well equipped country drug store which I operated in connection with my practice. I was arrested last June for violating the pharmacy law of this state and am under bail for one hundred dollars for appearance at court, August 14, 1893, at Tunkhannock. Pa. I had a training in the drug business with my father—who also kept a small drug store which he operated in connection with his practice—since I was fourteen years old. At the time the pharmacy law was passed in 1887, I was qualified as manager, which under Section VII, would entitle me to registration without an examination. After I graduated I applied to the board to be registered but they refused to register me, saying that if I wanted to continue in the drug business I would have to stand an examination before the Board of Pharmacy, or wait till I had practiced three years and apply under Section II. I continued right on with my business,expecting to register after I had practiced the three years. When the three years had expired I wrote again to be registered, but a reply came back very quickly that Section II had been repealed just two weeks before and the only way there was open for me was the examination. I complied with their request but was rejected. The Board from the beginning treated me with great disrespect. One of the members when he came to investigate, said to me when I met him at the depot and showed him all the courtesy I could, "We will go and see what kind of a ranch you keep."

I understand that the Board intends making this a test case.

I appeal to all my fellow graduates to aid me to make a defense.

Fraternally yours,

Noxen, Pa. G. H. Tibbins, M. D.

Bromide of Potassium for Invagination.

Editor of Medical and Surgical Reporter:—The morning of March 10, 1889, I was summoned by Mr. S. who stated that his wife had suffered from colicky pains all night and was growing worse. The lady was aged 24, and four months pregnant; they supposed she would abort. In making examination I could readily distinguish a tumor in the region of the ileo-cæcal valve with other symptoms attendant upon invagination of the bowel. I gave her opium and belladonna. In the evening her condition was no better and I gave an enema of hot water but with no relief and continued the opium and belladonna. The next morning the patient was worse, showing considerable shock. As we were far removed from an abdominal surgeon, section could not be seriously considered. As bromide of potassum is one of our best antispasmodics, and as the disease under consideration unquestionably is of that class, I concluded to give it as a *dernier ressort*. I gave it in doses of ten grains once every hour, and in ten hours after giving the first dose the invagination was reduced.

I am well aware that a single case does not prove anything, but as bromide of potassium is the remedy *par-excellence* in certain forms of infantile colic, and as both diseases belong to the same class, viz, spasmodic, why should not the drug have a curative effect in intussusception if it has such action in its analogue? In my experience this valuable agent exerts almost a specific action on spasmodic diseases of the intestinal tract, and, with enough opium and belladonna to control deranged peristalsis, we have in bromide of potassium an invaluable medicine in all cases of invagination at all amenable to medicinal treatment.

The effect in this case was striking and unlooked for, and since in no text book can I find the salt mentioned as a remedy in this disease, I desire to give my happy result publicity throughly The Medical and Surgical Reporter.

Harvey Vannatta M. D.

Seal, Ohio.

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SATURDAY, AUGUST 19TH, 1893.

EDITORIAL.

SPECIALISM IN MEDICINE.

The day has long gone by, never to return, when it was possible for one human intellect to master all that was known of medical science. As a necessary result of the increase of knowledge, medical literature has been divided and subdivided till there is no end to its ramifications. The old doctor,—physician, surgeon, obstetrician all combined in one—has gone, and in his place we have three practitioners, each with a special branch with which he is more familiar than his neighbor. Doubtless this has tended greatly to the increase of learning and to the physical welfare of mankind in general, but is there not a danger behind it all that has been creeping on so slowly that it has hardly been recognized as a danger at all? Is there not a tendency to enter into a specialty without the previous general training that should fit the man for the practice of that branch of medicine to which he is most drawn by his liking and tastes.

Perhaps this is most marked in that newest and most entrancing specialty, abdominal surgery. Allured by the brilliant results of a few operators and by the seeming simplicity of the operations, men have rushed into the field and proclaimed themselves masters of a division of surgery of which they knew little and into which they were drawn by the wave of enthusiasm with which the profession received this new offspring of medical science. Men, fresh from the college benches, with the newness of their diplomas still painfully apparent, have been tempted into the department of surgery that above all requires a cool head and a thorough mastery of all the resources of the surgeon's art. The result has been disastrous in many instances, lives have been lost or rendered unbearable from the untimely zeal and eager desire of these men to stand in the sacred temple of fame. Lured by the results of operators who have achieved their brilliancy as operators and their magnificent roll of lives saved on account of their long, painstaking years of work in this direction, these new comers have entered regions that should have been holy to them and over which should have been written the legend "Noli me tangere."

The outcome of all this is easy to see. Any specialty into which men enter unprepared, must decline and lose its position among the handmaidens of medical science. In none of the branches of human arts or learning do men begin with as little practical knowledge as they do in a medical specialty. The young lawyer, fresh from his Blackstone, does not pose as an authority on the relations of landlord and tenant or become the great expounder of international law. He sits down quietly at his desk and watches the work of others who having been toiling at legal mysteries for years before him. Patiently, he goes on looking up points for some great legal battle in which the head of the office is engaged, gradually becoming more and more versed in the intricacies of his profession, till at last he can take his place among the chiefs of the legal army, and other young braves do the drugery that he has done for so long.

A man whose diploma proclaims greeting to all with whom he shall meet, and that the bearer has become very learned in the arts of mechanical engineering, enters the machine shops of a railroad. The officials do not greet him with "here comes a specialist, let us make him superintendent of motive power." He begins at the bottom, cutting threads on the bolts of the great machines that he hopes some day to have in his charge. Step by step he climbs through the grades of work in the shop till he stands as engineer on the foot board of one of those leviathans whose construction he has so laboriously assisted in. His college work has been taken only for its theoretical learning and not till he has mastered the whole practical part of his profession, from the thread on the smallest bolt to the maintaining of the fire that will supply motive power and the guiding of the locomotive through its daily task, is he fit to superintend the care of the company's motive power.

Thus will men do for the preserving of their legal rights and property, but when it comes to their lives they seem strangely indifferent. It remains for the doctor himself to fit himself for his duties. It is right that there should be specialists, but it is not right that they should be without the training that can be obtained only by a knowledge of general medicine and a careful preparation for their work by watching the work of the masters of their art. In our advance in the teaching of medical science we may have thrown overboard some things that are useful. The young practitioner of fifty years ago studied in his preceptor's office, and while he only got a narrow view of the practical side of medical work, he also got the method thoroughly drilled into his head. The modern student should study not only books, but men and methods. Let him choose an older man whom he will follow as a master and when he has become grounded in his master's specialty, then is he competent to stand before the people in the rank himself of a specialist.

CHRONIC alcoholism may be attended with symptoms resembling those of general paralysis, but the former are not progressive if the alcohol be withheld, while the latter, once manifested, continue to a fatal issue. The lesions of chronic alcoholism also most closely resemble those of general paralysis, but in one condition careful examination shows that the morbid changes fundamentally involve the intima of the vessels, while in the other it is especially the adventitia that suffers.

PROF. HARE says camphor monobromate has been found very useful in cases of delirium tremens, in which the gastric mucous membrane is depressed and out of tone, and in which the nervous twitchings are troublesome.

TRANSLATIONS.

SERUM-THERAPY AND THE TREATMENT OF TETANUS.†

Chouppe (*Le Bull. Med.* March 26,'93). says that since the first memorial of M. M. Behring and Kitasato in *Bull Med.* 1890, p. 1085, repeated attention has been given to the attempts that has been made to cure tetanus by injections of immunized animal serum. These attempts have thus far given negative or doubtful results. Behring and Kitasato argued that the blood of animals rendered immune to tetanus possessed the property of destroying the tetanic toxins and of vaccinating the animals against the disease. Shortly afterwards Behring confirmed the curative power of injections of antitoxic serum in mice already presenting decided symptoms of tetanus. This was the first attempt at the treatment. The vaccinating properities of the serum of immunized animals, its marked activity in destroying the toxins of tetanus when the serum and toxins are mixed either *in vitro*, or in the body of the animal, if injected simultaneously at the same point have been confirmed by several experimenters (Tizzoni and Cattani, Vaillard, Roux and Vaillard). This power, however, is of much less duration than Behring and Kitasato believe.

Behring and Kitasato had noted in their first memoir the possibility of curing tetanus already established by the injection of antitoxic serum. A little later, Kitasato confirmed these first conclusions by experiments on mice the subject of tetanus. These results, which were nothing less than the promise of a curative treatment of tetanus, were studied experimentally upon animals, at first by Vaillard who achieved only failure, and then by Tizzoni and Cattani who did not succeed any better. Moreover, the last experimenter noticed that the serum was not curative, even when the injection was practiced before the appearance of the tetanic symptoms, if, indeed, the injection was made only a few hours after the introduction of the toxin. Nevertheless, Kitasato pursued his researches, and in a new memoir he cited the results of the treatment of confirmed tetanus in mice. The result was as follows: A dozen mice were inoculated with a solution impregnated with tetanic spores. At the end of 35 hours all those animals presented the symptoms of tetanus. Two died tetanic 55 hours after inoculation. The other ten were treated by intra-peritoneal injections of antitoxic serum. Five of those died tetanic in 48 hours; the remaining five were cured. Behring on his side has published recently an article upon the experimental treatment of tetanus (*Dar Tetanusheilserum*, Leipsig, 1892); he has cured mice, sheep and a horse, in which tetanus had already developed before the commencement of the treatment. This shows the present status of the question. Roux and Vaillard have performed all of the experiments previously made, and a great many new ones, and their conclusions, which are nearly all negative, may be accepted. They have established the following point: when the antitoxic serum is injected long after the toxin or after the inoculation by the bacillus, so that lesions are already produced, it is unable to prevent a grave tetanus; if it succeeds it is only in the slight forms where cellular lesions are only tardily produced. But when the tetanic symptoms appear the nervous cells are already profoundly modified, and in their condition it is probable that the serum cannot be curative. In performing their experiments they have divided them into two classes: 1. Infection by the toxin; 2. infection by the spores deprived of the toxin. Whatever may be the mode of infection it is very difficult, they conclude, to cure an established tetanus in animals. When the first symptoms appear, the quantity of toxin elaborated is most often sufficient to slay the animal; it has acted upon the cells and the antitoxin cannot do anything to a poisoning already made.

A point to be borne in mind is that the subcutaneous injections of antitoxic serum have been entirely inoffensive in animals; all the probabilities are, therefore, that they will be also in man. In no instance can any bad effects be traced to the serum injectors. Kitasato made the first injection ever made in man. It was unsuccessful, because it may be that the case was a grave one and the treatment begun too late. Tizzoni and Cattani in Italy have employed the injections in eight cases, all followed by a cure (*Centrall. für Baklesiol. and Parasilink* Nov. 24 and 25, 1891). Their results, however, cannot be relied upon, since Albertoni claims that the cases treated and resulting in death were not published. Chouppe would conclude from his studies that bacteriologic researches relative to tetanus have not yet given an agent of an appreciable curative power in established tetanus. The only thing left to the physician is excision of the infected wound, and the use of nerve sedatives.

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† Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Dorland, M. D.

EXTIRPATION OF A SPLEEN FOR TRAUMATISM.*

Reigner has reported a case of extirpation of an injured spleen following traumatism, (*Berlin Klin. Wöchen*, 1893, No. 8). He performed the operation on a boy aged fourteen. An outline of the history of the case would be of interest. On the day after the fall the pulse became gradually weakened; increasing pallor and dullness in the lower portion of the abdomen. The diagnosis was made as an intra-abdominal hemorrhage, necessitating an abdominal section.

On examining the interior of the abdomen there was found a transverse tear of the spleen of such dimensions that the lower portion was almost entirely separated and unconnected with the hilus of the spleen. The entire separation of the large blood vessels was regarded by Reigner as favorable, since the bleeding could only take place through one surface. The lower portion was at once separated and removed with other blood clots, the upper blood vessels and phrenicolineale ligament was speedily and thoroughly ligated. After a careful examination further injuries could not be found.

Healing of the wound and apparent entire recovery after twelve days; unfortunately gangrene set in through venous thrombosis, which made it necessary to perform an amputation four weeks later after the method of Gritti. Recovery seven weeks later.

This case was carefully watched by the author; seven months after the removal of the spleen he noted the patient's condition as good, the various functions seemed to perform their normal duties. The liver normal in size, but all external chains of the lymphatics are swollen; four weeks after the operation isolated glandular swellings were occasionally noticed; now after seven months isolated plexus, for instance in the axilla, were found to diminish in size. The thyroid gland seemed enlarged. The medulla of the bone of the amputated limb shows a more active formation in the medulla than was to be expected. There had been an active increase in the blood vessels in the marrow of the bone, the canaliculi were contracted, the haversian canals were enlarged. The new marrow entered into the periosteum which could be seen distinctly by the naked eye, reminding one of the description given by Neumann and Mosler, as they had observed it in the animals upon which they had removed the spleen.

The examination of the blood showed that the increase or decrease of lymphocytes depended comparatively upon the glandular enlargement or contraction, and at the time of their decrease there was noted an increase of the polynucleated cells. There was nothing abnormal in the examination of the marrow other than active growth of the same. This was also affected by the variation of the glandular system.

Changes of the red blood corpuscles were never found; granular red blood cells, etc., were also absent. The author promises further communications upon this one very interesting case, as well as some experiments which he expects to perform on animals.—*Centrabl. für Chirurgie*, No. 23, 1893.

Acne.

Unna prescribes the following ointment for acne:

℞	Unguent. zinci	āā . . 10 parts.
	Lanolin	
	Calcii chloride	
	Sulphur præcip	3 "

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*Translated for **The Medical and Surgical Reporter** by Marie B. Werner, M. D.

ABSTRACTS.

THE PATH OF IMPROVEMENT IN CANCER TREATMENT.

Dr. Herbert Snow, of London, in writing on this subject in the *Medical Press and Circular* says that: Cancer has long been regarded as the opprobrium of surgery, and I fear there is little doubt that the heroic new departures in surgical procedure of which we now not seldom read, will in the main rather intensify than lessen our reproach among men. Yet I cannot help thinking that were certain definite principles and axioms in the pathology, diagnosis, and treatment of malignant disease more clearly taught in the schools, and more accurately appreciated by the profession than has been hitherto the case, we should soon witness a corresponding improvement in results, an enhanced confidence on the part of the general public, with a proportionately less eager resort to the nostrums of quacks. I purpose here briefly to set for the a few of these:

1. *How does Cancer Kill?*—A complete reply to this question would involve a discussion of numerous technical details, which need not here be referred to. Sufficient for the present purpose it is to point out that, in those cases which especially claim the care of the surgeon, life is terminated much more often and in much greater degree by the metastatic offshoots than by the primary lesion, or by any consequences directly arising therefrom. That a malignant tumor thus more often kills indirectly than directly, by reason of the infective and autositic properties which its cell-elements have acquired, and by the ready transmission of these *per* the blood or lymph to distant parts. Of old the "recurrence" of cancer was attributed to its constitutional origin. That view has been dispelled by the advances of modern pathology, among which, by reason of its important practical bearings, I would take leave to mention my discovery of the insidious marrow-infection which accompanies ordinary breast-carcinoma. We now know that every species of cancerous neoplasm commences in a limited tissue area, whence contagious particles are transmitted by definite "infection-paths," which can nearly always be predicted.

From this principle may be deduced significant practical corollaries. First, that axiom upon which I conceive the future improvement of cancer-surgery most of all to hinge: of removing all the dangerous lymph-glands in the "infection-path" of a carcinoma or epithelioma, before they have had time to undergo increase in bulk. Thus the fatal progress of the infective lesion along its natural track is intercepted; and perchance complete extirpation may be effected. We should never attack an epitheliomatous tongue or lip, unless in a very advanced stage, without seeking also to remove the glands certain to be already infected, viz., those upon the anterior edge of the submaxillary serous gland, when the lip or fore-part of the tongue is diseased the cervical, opposite to the angle of the lower jaw, when the hinder regions of the tongue are first affected. We should only in rare cases excise a carcinomatous breast, without simultaneously evacuating the corresponding axilla. A melanotic or epithelial sore on the lower extremities or libia, should enjoin simultaneous attention to the surface lymph-glands in the inguinal region on the same side, and so on.

If, on the other hand, we wait until the lymph organs in question have undergone appreciable enlargement, we may be reasonably certain that the infection has already passed to other glands beyond our reach, and will eventually reappear (recur). Gland-enlargement is a relatively *late stage:* we have a previous one of tenderness merely, and before that of insidious deposit not attended by symptoms. Each of these in carcinoma lasts several weeks. Needless to point out that from the lymphatic system germs eventually reach the blood. To excise with the usual display a malignant primary tumor, when we neglect the secondary deposits which we know must have already ensued, is a sham operation, not a real one.

Again, it is commonly of more consequence to the individual to remove these secondary deposits than to take away the primary cancer, even when no more than immunity from future suffering, and transient prolongation of life can be hoped for. The evacuation of the axilla with a breast carcinoma serves effectually to preclude that very distressing symptom "brawny œdema of the arm," due to lymph-stasis, combined with constriction of the axillary vein by a ring of cancerous parenchyma in the lymphatics. The suffering attendant upon neglected epithelial deposit in the cervical lymph glands of a physically vigorous man must be in every one's knowledge. The primary lesion of melanotic cancer of the integument (in the majority of instances, an epithelial disease generated in the deeper layers of the Malpighian rete) is commonly to the last a small ulcer or warty growth of the most insignificant dimensions. It can be radically extirpated, as a rule, without difficulty and without the least fear of local "recurrence," though too often the disease process is carried on to its fatal end by means of the previously infected lymph glands (see cases republished in "Cancers and Cancer Process," p. 365).

The routine operative treatment of cancers is greatly to be deprecated. Every single case should be scrupulously dealt with on its own merits, and not on any universal rule, with regard to numerous points of detail, such as the pathological species of the disease, the tissue this is most prone to infect, the idiosyncracies of the patient, etc.

II.—Considerations on Early Diagnosis.—It follows from the preceding that if we seek surgically to extirpate, that is to cure, cancer beyond the possibility of eventual re-growth, we must needs learn to recognize malignant disease, either before secondary infection has been established, or before it has advanced to any considerable distance from the site of origin. The diagnosis is easy enough when the lesion is of old standing, and is then practically useless; to be of real value, it must be effected in the incipient stage.

The subjective and objective signs, as laid down in ordinary text-books, pertain rather to the former period than to the latter, so are of but partial avail. What is really wanted is far greater stress than has hitherto been laid, on *à priori* considerations, so that we may be, as it were, on our guard against malignant processes, may know who is a likely subject for cancer, and who the reverse.

In the work above quoted I have attempted to constitute a novel group of cancerous neoplasms, derived from embryonic vestiges, not perfectly effaced. These, which I have termed blastomata, appear for the most part in childhood. They constitute a numerical minority of the total cancer cases, so do not affect the propositions here put forth in respect of the ordinary malignant disease of adults. Between these congenital neoplasms and the cancer of later life, there is a great pathological gulf fixed. With the exception of this anomalous and exceptional section, cancer is emphatically limited to persons who are growing old. Cancerous males are generally past forty; females with breast carcinoma are seldom younger than thirty-eight; those with uterine cancer, not often under thirty-four. The average cancer age is from thirty-eight to sixty years, and begins a few years sooner for women than for men. Thus persons who have attained this period of life are on that ground alone predisposed to malignancy. Heredity, it may be remarked, is an element which is much more likely to mislead in diagnosis than the reverse. In seventeen years' experience I have learned that a person who comes to me with a strong family history of cancer, is much more likely to be suffering from some innocent ailment than from this dreadful scourge.

The mammæ and uterus of women, and the mouth-cavity of men are the elective seats of malignancy in the two sexes, and derangements here apparent during the cancer age, therefore, demand special attention. People, male or female, who have undergone conspicuous impairment of general health, and loss of vitality from any cause whatever, are most liable to cancer-developments. The female organs referred to undergo a normal process of dissolution on obsolescence, and anything which interfers to hinder this is the fruitful parent of malignant growths. In this way mental anxiety and trouble are the common immediate forerunners of mammary and uterine carcinomata; so exhausting illness of any kind (I have known several cases immediately consequent upon influenza), specially toilsome occupations, such as that of the laundress, etc.

Such is the natural tendency in age, and in the degenerating female organs to cancer, that after the thirty-eight years period, any tumor in the mammæ, whether previously noticed, or then appearing for the first time, becomes sooner or later associated with truly cancerous phenomena. Solid connective-tissue growths enclosing gland acine, adeno-fibroma, cystic fibroma are thus always of serious import. Even a simple cyst (sometimes a dilated duct, more often a dilated acinus), quiescent for some years, ends either by developing "intra-cystic vegetations" from its walls or by irritating the contiguous acini into malignant proliferation. These vegetations are most frequently carcinomatous, a less common form consists of embryonic connective-tissue (spindle-celled-sarcoma). A few are composed of well organized fibrous tissue, non-malignant, but always with a tendency to become more embryonic, and so sarcomatous. Thus it should be a maximim of the practical surgeon to regard every mammary neoplasm in an elderly woman as either an actual or a potential cancer.

Young people are particularly prone to lymph gland enlargement upon any slight provocation, most commonly of septic character; the old rarely suffer in this way. Thus any such feature after the age of forty, particularly when subsequent to mechanical violence, and when no septic cause can be detected in the vicinity, is strongly suggestive of primary malignancy in these organs (lympho-carcinoma). Both affections begin insidiously and painlessly. The latter is diffused very rapidly and is one of the most virulent of cancers. Should there be suspicion of malignancy, which, in an elderly person, must always be the case under the conditions mentioned, an exploratory incision should be performed with the least possible delay; thus alone can life be saved.

III.—Importance of certain pathological considerations.—The foremost consideration, from a practical point of view, is the escape of the adjoining lymph glands from infection per the lymphatic vessels, in true sarcoma, whereas in carcinoma and epithelioma, these organs very early become the seat of deposit. If, with a malignant growth developed from connective tissue corpuscles, we find glands in its vicinity enlarged, we know that there is general blood infection, and that metastases are also present in the vicera, consequently that an operation will have no curative efficacy. Hence in sarcoma, it is unnecessary to remove, as in carcinoma, the neighboring glands; and, if these be obviously attacked, it is generally best to decline operative interference altogether.

Unfortunately, however, a mischevious practice has crept in, of calling any acutely-growing malignant tumor of uncertain origin a "sarcoma," and thus that word has acquired a very vague signification. In the breast, soft cell-masses of encephaloid carcinoma are commonly so-styled; with these there is early axillary deposit, and the contents of the corresponding axilla need evacuation exactly as in the more chronic scirrhus, although the glands often do not exhibit much actual increase in bulk. On section these are gray, soft, pulpy, friable; the true sarcoma here is generally yellowish, its cut surface is fibrillated, and parts may be composed of well-organized fibrous tissue. The two species may generally be differentiated by the naked eye, with, of course, an appeal to the microscope later on. On the appearances disclosed by an incision immediately after removal do the further measures of operative procedure depend.

Symptoms of *marrow-infection* by breast carcinoma, particularly that which consists in a slowly-advancing prominence of the sternum in its junction with the second costal cartilage, necessarily indicate that amputation of the mamma can be palliative only. (For further details, see the work above quoted, p. 66).

IV.—Palliative Operations.—As a general rule it is unwise to attempt the excision of a malignant growth unless the whole of the palpable tumor can be removed; and unless there is good reason to anticipate prompt union of the wound. Cancerous parenchyma cut into, or otherwise irritated, will, as is well known, subsequently grow with greatly enhanced rapidity. Transgressions of this wholesome rule are largely accountable for the popular disfavor into which the surgery of cancer has fallen. The cases in which operative treatment is resorted to should be carefully selected; and there should be no indiscriminate resort to "the knife."

Valid exceptions, however, exist. The suffering by pain and starvation which tongue-epithelioma ultimately involves inculcate the extirpation of the organ at all hazards, even when some fragments must of necessity be left. And sometimes there is such imminent risk of death from repeated hemorrhage, in the case of tumors elsewhere, that it is wise to attempt their partial removal.

Under all such circumstances, however, it will be well to eschew the knife for two reasons; one, that the patient is often very weak and cannot sustain the loss of blood which any cutting operation would involve; the other, that burning cancerous parenchyma checks its development instead of accelerating it. Even if the resulting wound does not heal, a chronic excavated ulcer will follow; not the exuberant fungous protuberance commonly seen after a measure of the former class. Thus, ablation of the tongue is effected without hemorrhage, shock, or risk by the galvanic écraseur. In other parts, a fungous bleeding mass may be shaved off, with much benefit the patient, by the same instrument, or by Paquelin's thermo-cautery.

V.—Chemical Escharotics.—Caustic applications in cancer are, of course, the great stronghold of quacks, who thus trade upon the fears of the timid. In carcinoma and the more severe forms of malignant disease they necessarily cause far more pain and shock than the usual methods of treatment. They can not, moreover, be had recourse to by the conscientious practitioner, on account of the principle pointed out at the commencement of this paper. It is the metastatic deposits in lymph glands and deeper tissues, that constitute the real *crux* of cancer surgery; we cannot apply chemical escharotics to deeply-seated glands.

In small superficial lesions, which are not associated with lymph-gland infection, such remedies are not absolutely barred, and may even possess distinct advantages. For in chronic epitheliomata, or rodent ulcers, they often answer admirably. The best is the stick potassa fusa, which acts rapidly and thoroughly, and whose operation may be instantaneously checked by contact with *water*. There is no subsequent pain or shock; the more fashionable zinc chloride is, however, conspicuous for the severe suffering which its use involves. Sometimes strong sulphuric acid in charcoal (or with asbestos, as in the notorious Michel's paste) may be resorted to for the purpose of destroying bleeding fungous granulations, but is apt to run over and injure the healthy parts. Its work can generally be done much better with Paquelin's cautery, Pastes of every kind are an abomination, slow, uncertain, painful, dangerous. The surgeon who has tried the potassa fusa will not seek any other caustic treatment of cancer.

VI.—Medicinal Treatment.—Making certain local exceptions, which must needs occur to every one, the golden rule in cancer not amenable to cure by surgical eradication, is to initiate at the earliest moment the administration of opium or morphia in small, continued, gradually-increased doses. The patient with an incurable maligmant tumor should thus become permanently subject to the morphia habit, purposely induced. The drug should be given with the avowed object of arresting and keeping in check the progress of the lesion.

The benefits of this principle are most evident in connection with carcinoma in the female breast, though by no means limited to this. If we are able to get the patient well under the influence of opium before ulceration has taken place, and the case be not of the acute type, we commonly see the organ pass into that atrophic, shrivelled condition of almost stationary disease, which causes no suffering, and is compatable with many years of comfortable existence. In uterine cancer, of which ulceration is a feature *ab initio*, considerable prolongation of life is effected, but not to so marked an extent as in the breast. The practice of withholding opium until compelled by pain to resort to its use, merits unmeasured condemnation from every point of view. Careful tending is imperative, and undue exertion should be avoided; an ulcer should never be permitted to become covered by an unsightly scab, or to emit an offensive smell; rest in bed should be encouraged. A patient who has been operated upon should, if possible, be kept under observation for at least two years subsequently. In any such believed to be liable to "recurrence," and particularly in women who display the peculiar physical signs of marrow-infection, treatment on the above plan should be instituted immediately after recovery. Humanely speaking, the path of improvement which I have here attempted imperfectly to indicate, would seem at present to lie far more in the better use of weapons long ready to our hand than in the discovery of new

APPENDICITIS: WHAT IT IS AND WHAT IT IS NOT—FROM A SURGICAL STANDPOINT.

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Among many with the fear of surgery before their eyes, there is a widespread and possibly a growing opinion that the advanced surgeon of to-day rushes upon every so-called case of appendicitis knife in hand, something after the manner in which our English friends fearfully dread the wild onslaught of the murderous Comanche in Chicago. To the surgeon holding in his mind the dangers and complexities of all serious abdominal work, most of all that in which the integrity of the vital organs is involved, the eagerness with which this operation is supposed to be sought is amusing. With those to whom the abdomen is as yet a fairyland of surgery, where reputation may be speedily got, and mistakes hastily veiled in the coroner's office by death from heart failure and exhaustion, the fair field is enticing. But woe to the untrained explorer who anchors his tray beside the siren, "Appendix," floating dreamily in a puddle of pus. The electricians are happier than he, and rather to be desired. With a view of insisting rather that surgery and surgeons shall not be held responsible for every vagary of the imagination by which operation is justified, whether cause exist or not, some of the determinate conditions and considerations belonging to the operation are here briefly presented. First of all, the anatomical relations of the appendix must be considered as settled finally within the peritoneum, and therefore, any inflammation of the organ is necessarily within the peritoneum; and inflammation outside the peritoneum, associated with the appendix, is the result of extension of the disease from within, outward. Advancing along in the anatomical conception of the disease, we must remember that no matter what the cause of irritation or inflammation in the organ, we must not expect a common symptomatology or a fixed locality by which the disease is infallibly to be recognized or located. This opinion, in view of the somewhat general belief in the McBurney point, must be explained anatomically. Elsewhere I have referred to the anatomy of the cæcum as insisted upon by Rokitansky, and a careful attention to a few points, *seriatim,* must convince the most skeptical, that although in a few cases the point of greatest pain in appendicitis may be constant, still there is no anatomical ground for this, and the cause is found rather in pathological adhesions in a given line than for any other reason. The cæcum hangs more or less free in the abdomen, and has therefore considerable latitude of motion. There is first, rotation upon its own axis; second, rotation upon the mesentery as an axis; and third, upon another intestine as an axis. By rotation upon its long axis, the cæcum may become so twisted that the ileum opens on the right side, but when revolving on its short axis the appendix may be placed toward the anterior abdominal wall, or it may be placed at the posterior aspect of the intestine. It will be evident that when these motions are concomitant there will be a resultant of motion and that the location of the appendix must vary according to the movement of the cæcum. So far as the mesentery of the appendix is concerned, there is frequently a pouch between it and the ileum consisting of folds of peritoneum; by rotation of the cæcum this mesentery becomes either congested or atrophied and is thrown into a band or perforated, in either way becoming a source of danger to the near-lying intestine, for it may either choke it off as by a cord or ensnare it through the perforation, choking it in true hernial fashion.

If we consider these anatomical relations for a moment, it will be evident first, purely that a physiological motion may result in a dangerous pathological condition, and secondly, that this physiological twisting or revolution approximating it may provoke a symptomatology most misleading, and therefore dangerous so far as it apparently justifies extreme measures. It will also explain how in many cases in which the symptomatology has been presumably grave, the trouble has suddenly subsided and may never again return, for the reason that there has been in reality no real appendicitis by occlusion, retention or secretion, but only a physiological twist and corresponding irritation which has righted itself. So far for apparent disease of the appendix; now let us look at the real disease, so far as exact location is concerned. It is the universally conceded fact, that in operation for appendicitis, the appendix is not always readily discovered. Some operators fail to discover it at all. Why this should be so, when it is alone the seat of the disease, I do not understand. Why on opening the abdomen it is not always found in the same position is easily explained by the anatomy just referred to. The position must vary with the motion of the intestines with their degree of distension, again by the accidental adhesions of the organ and the adjacent structures, and again by the length of the orgain itself. It has been found in the inguinal canal, now up against the anterior abdominal wall, and again in the floor of the pelvis. In women it is no rare thing to find it mixed up with an ovarian cyst, and it may, by extension of inflammation, cause a perforation of the diaphragm. All the facts being considered, it is fallacy to argue that lesions of the organ must have a mathematical constancy, either of kind or degree, or of situation. There must be variation in all them, according to anatomical peculiarities of the parts, and according to the nature and extent of the adhesions and the duration of the disease. These arguments and facts I consider are sufficient finally to dispose of the real value of the McBurney point, although this has had its justification in the brilliant results of the surgeon whose name it bears, and whose insistance upon the legitmacy and true *rationale* of the operation for the disease under consideration has done so much to give it permanency in the advanced surgery of to-day.

What must be considered operative cases of appendicitis outside the presence of abscess, must perphaps for a long time remain an open question. Pus, the advanced surgeon, no matter where its location, considers a legitimate cause for attack, and when once this condition is present, delay is no longer to be considered. As to the diagnosis of pus, the question of duration of the disease and the accompanying symptomatology of pain and tenderness is always to be considered. The temperature is not necessarily high, is often sub-normal, and if there has been rupture, shock will usually have been present according to the degree of pus-invasion and occupation. If limitation by adhesions has occurred, the patient will rally and further delay will diminish chances of recovery. The point of greatest sensitiveness connot be regular, and is in most instances traceable more to the discomfort produced by the stretching of adhesions, than to the inflammation in the appendix. If the omentum has become adherent at any point, tension, movement of coughing, turning, or any movement whatever, must be more or less painful. In the real presence of pus, if the inflammation is near the anterior plane of the belly, the walls over the seat of the inflammation are apt to be infiltrated and boggy. If, however, the appendix is deep seated in the pelvis, this bogginess, while not discoverable anteriorly, will be discovered by examination per rectum. For this reason, examination by the bowel, which is often left until the last, should be one of the first procedures to establish the diagnosis. If the tumor is above the iliac bone, or near lying to them, percussion may be dull; if, however, the disease is deep seated, there may be tympany, owing to overlying intestine. In arriving at a diagnosis, the moderate and careful use of salines or of calomel is of more than a little use. If the inflammation is only congestive, or is mechanical, the emptying of the loaded bowel will relieve pressure, and thereby permit a general resolution with the abatement of all the symptoms. Moreover, if the tumor is fecal, this is removed and a diagnosis rendered possible if other mass remain. The use of the aspirating needle is precarious in the extreme, and is not to be advised. Pus may be so deep seated as to escape detection, and on the other hand so situated that perforation of the sac containing it be a most dangerous step. Again if the condition of the patient is such as to justify exploration of this nature, incision is no more dangerous and much to be preferred, as at once making a diagnosis, and affording a means for relief. In long-standing cases, motion of the right leg is accompanied by pain, and the thigh is constantly flexed, while its complete extension is either impossible or accompained with great pain. With the mind directed to the operative features of the disease, careful observation along all the phases of the attack will generally enable a distinction to be made between cases essentially abscess-like from the start and those of a less degree of inflammation. Among the latter that claim the attention of the surgeon are those recurrent in their type. Given a case recurring at various intervals, each recurrence marked by an increase in the seriousness of the symptoms, to the surgeon holding in mind the probabilities of the case, operation will be usually certain of selection. Every patient holding within his abdomen sufficient cause for periodic attacks of this nature, is never free from danger of a last fatal attack. In these instances the operation during the quiescency of the disease is to be considered. To my mind the argument of Senn for operation after a primary attack of appendicitis, granting that the nature of the disease is well established is logical, and the practice in good hands safe.

In the minds of many, the non-surgical treatment of appendicitis has by far the best of the argument. Case after case is cited in which recovery has taken place under the use of opium, and therefore, in the minds of those who pin their faith on the claims of Alonzo Clarke, surgery has little, if any excuse in appendicitis, if it be remembered that pain and tympany, and rise in temperature, may all exist in the right iliac fossa without the existence of appendicitis at all. Hence if a localized peritonitis, produced by the twisting or revolution of the intestines is present, opium will relieve the pain and consequently, as the gut is also thereby put at rest, in the interim it will have regained itself and the symptoms will abate.

The same logic follows the calomel or saline treatment.

If the gut is slightly twisted and congested, if it be freed from its contents and therefore given a greater possibility of physiological contractions, the normal integrity and relations are at once restored and the pain is at once relieved. Even in the presence of pus the relief of the congestion, brought about by the use of salines often conduces to the greatest comfort of the patient and gives a relief that seemingly interdicts operation. The same is true in tubal and ovarian pus disease in women.

It will thus be seen that the two methods of treatment in the non-suppurative forms of inflammation both accomplish the same thing in essentially the same manner.

Intertrigo.

Dr. W. de Garmo (*La Semaine Medicale*, No. 12, 1893) recommends the following powder as superior to all other measures in the intertrigo of children and adults:

℞	Powdered starch	gms. 120 (℥iv).
	Prepared chalk	gms. 60 (℥ij).
	Burnt alum, Powd. bor ic acid, āā	gms. 8 (ʒij).
	Carbolic acid	gms. 2 (gtts.xxx).
	Essence of lemon	gms. 1 (gtts.xv).

Mix and reduce to an impalpable powder. Use as a dusting powder.

—*Pritchard.*

A Good Alterative.

Dr. Clark of Youngstown, O., furnishes the following formula to the *Medical Summary*:

℞	Syr. sarsaparillae comp.	℥ij.
	Ext. burdock fld.	℥j.
	Ext. taraxaci fld.	℥j.
	Syr. acidi hydriodic.	℥iv.

M. Sig.—Teaspoonful in water three times a day.

Cramps of the Legs in Pregnant Women.

Administer at bed-time ·5 milligrames of sulphate of copper. This can be given every night without inconvenience.—*La Gazette Medicale.*

Otalgia.

The receipt given below has been found useful:

℞	Menthol, Camphorae, āā	gr. xx.
	Liq. Albolene	℥i.

Drop in ear p. r. n.

Urticaria.

Bordeaux has found the following prescription to give great relief in urticaria:

℞	Liquor calcis Aquae Laurocerasi Glycerini	equal parts. M.

Sig.—Apply externally and cover with cotton.

THE subject of animal speech, which is now attracting much attention in the scientific world, will be treated by Professor E. P. Evans in the opening article of the August *Popular Science Monthly*. Professor Evans gives much striking evidence to show that animals communicate among themselves by vocal sounds, and that many of them learn the meaning of human speech.

CURRENT LITERATURE REVIEWED.

THE AMERICAN GYNECOLOGICAL JOURNAL. for May. Dr. Alexander J. C. Skens contributes a paper on

The Pathology and Treatment of Injuries of the Pelvic Floor.

He divides all the injuries of the pelvic floor into two classes: First, those that occur in the median line of the floor and in direction corresponding to the axis of the pelvis; and second, those injuries that occur above the floor itself, transverse internal lacerations. The laceration in the median line occurs in various forms, from a solution of continuity of all the tissues extending from the posterior commissure to the sphincter ani to a complete laceration of the sphincter. To these well recognized injuries he adds another as the result of his observations, viz., subcutaneous laceration of the muscles and fascia in the median line usually limited to the transversus perinæi muscles and fascia, but in rare cases involving the sphincter ani muscle.

The second class of injuries, which are transverse, and have been described as internal lacerations, consists in laceration of the fibres of the levator ani muscles and fascia, and this is usually attended with separation of the muscular layers of the vaginal walls from the pelvic floor. In some cases the laceration is complete, involving the mucous membrane as well as the muscular coat of the vagina, and, in very rare cases, the laceration extends upward and outward as far as the levator ani muscle extends, but as a rule the laceration of the levator ani is subcutaneous, that is to say is not attended with laceration of the mueous membrane of the vaginal wall.

In the median line injuries, extending from the posterior commissure down to and including all the tissues of the pelvic floor at this point, he operates simply by removing the scar tissue, and in so doing vivifies the ends of the muscles and fascia that have been divided. The vaginal wall, which has been attached to the lower angle of the laceration, is liberated and raised up so as to form the inner surface of the pelvic floor. In complete laceration involving the sphincter ani, he follows closely the principles involved in the Emmet operation.

In operating on the transverse or internal lacerations, he follows the classical operation of Emmet so far as the lateral denudation in the vagina and suturing are concerned. In the median line he removes only enough tissue to liberate the vaginal wall from the pelvic floor and then reflects it backward and upwards. He then divides the tissues in the median line down to the sphincter ani muscle, or down to where he finds muscular tissue and fascia, thus producing by incision a complete median laceration. The angles in the vagina are then brought together by sutures down to the muscular tissue of the pelvic floor. The muscles, fascia and integument are then closed by sutures from below upwards; the enlarged vessels and cellular tissues are then crowded backwards towards the rectum and the vaginal wall united by to the pelvic floor with the sutures, which bring together the lateral edges of the floor of the pelvis. In this way the essentia requisites are obtained: first, the central part of the floor is restored, the so-called rectocele is disposed of without loss of the vaginal tissue, the normal relations of the vagina and pelvic floor are established, and the overdistended veins receive more support than can be afforded by any other operation known to the author.

Dr. J. N. Martin discusses the subject of

The Surgical Treatment of Fibroid Tumors of the Uterus.

The various operations for the relief of those suffering from these tumors are discussed by the author who sums up his paper as follows: "I approve that method, with conditions favorable, which leaves the cervix with the stump treated intra-peritoneally, and the lower segment of the broad ligament, for the following reasons:

First. It leaves a stronger floor for the pelvis, and it leaves the vagina in a better condition than when the cervix too is removed.

Second. It is better than fixing the stump in the abdominal wound as it permits of free dilatation of the bladder and there is no traction. The recovery is more rapid, as there is no sloughing mass left to separate and interefere with the healing of the abdominal incision. The operation can be completed with a short pedicle.

Third. The vagina is left in a better condition than with Byford's method. By his method the cervix and tissues about it are twisted out of shape and a mass is left to separate.

If the intra-peritoneal method is adopted we should be sure that the hemorrhage is controlled, exercise perfect aseptic methods in the operation and toilet, and to be certain, drain from the posterior cul de sac."

Dr. Mathew D. Mann also furnishes a paper on

The Operative Treatment of Fibroid Tumors of the Uterus.

In regard to oophorectomy the author believes that the operation has a field but a limited one. He would confine the operation to those cases where a small fibroid is associated with diseased tubes or ovaries.

His objection to the supravaginal method with the clamp is that the tightening of the clamp gives the patient great pain and that convalescene is prolonged. He urges the necessity of drainage in all cases after the intra-peritoneal method of removing these tumors. He also considers the Trendelenberg position an essential to the proper performance of the operation.

The final paper on

The Treatment of Uterine Fibroids.

is from the pen of Dr. Henry T. Byford. The author regards electritity as applicable to interstitial growths, submucous fibroids that do not project much into the uterine cavity. Subserous, multiple and hard tumors, whereever situated, are not much affected by its use. The author states that he employs vaginal fixation almost exclusively in hysterectomy. Abdominal fixation he says is perhaps a trifle the safest, but it is so often followed by hernia, and has such a prolonged and disagreeable after treatment connected with it, that it must be superseded by the first method that will show as good statistics.

Dr. J. M. Baldy contributes a paper on "Carcinoma of the Uterus" in which he urges the necessity of early diagnosis and the early removal of the uterus. Dr. A. Lapthorn Smith discusses "Some of the Elements of Success in Coeliotomy". The author lays stress on the prevention of handling of instruments and ligatures by visitors. He believes stitch hole abscesses are due very frequently to bruising of the structures by pressure forceps or from sloughing from sutures tied too tightly. Of all material for sutures he preferes silkworm gut. He considers the use of the drainage tube in proper cases as a material aid to the success of the operation, as is also irrigation. He advises that the silk worm gut sutures be left in place for a month in order to avoid the possibility of hernia. This, he says, it is perfectly possible to do if the sutures are aseptic and covered with dry boric acid powder.

Dr. Robert T. Morris contributes a paper on

Appendicitis.

advocating the operative treatment. In regard to the use of opium in peritonitis he gives the two following definitions of the drug:

"First. A drug which stupefies the physician who gives it more than it does the patient who takes it.

Second. A drug which greatly relieves the distress of the physician who without it would be compelled to do something rational for the patient who has put confidence in him.

Opium and peritonitis breed a vampire which lulls the patient to sweet repose while his life is being sucked out, and the doctor is looking the other way."

Dr. A. F. Kinne relates a case of "Dislocation of Both Knees Forwards during Intra-uterine Life."

The remaining papers are: "Conservatism in Operative Midwifery" by Dr. R. R. Lawrence; and "The Induction of Premature Labor" by Dr. L. Ch. Boisliniere.

THE MONTREAL MEDICAL JOURNAL FOR AUGUST.

The principle article in this month's issue is that by Dr. L. D. Buckley on

The Treatment of Lupus Erythematosus with Phosphorus.

The author states that he has seen the lesions disappear under the treatment in a very considerable number of cases and in a number of instances he has had the patient under observation for a length of time after the cessation of treatment. He asserts that there has been little or no difficulty in taking the phosphorus when the dose has not been pushed too actively. But the remedy should be given carefully. He believes that we must look for its action through the nervous system.

The form in which he now administers the the phosphorus is in a solution,

℞	Phosphorus........................	gr. vj.
	Absolute alcohol	ʒxxx.

To be dissolved with the aid of heat and agitation, and then mixed, while still warm, with the following mixture also warmed:

℞	Glycerin..............................	℥ixss.
	Alcohol.................................	ʒjss.
	Essence peppermint..................	℥ss.

Each drachm contains $\frac{1}{20}$ grain of phosphorus.

In most cases he begins with fifteen drops, in water, three times daily after meals. It is well to have the water added quickly after the liquid has been dropped out in an empty glass, and the dose should be taken at once, as he believes that the presence of water changes somewhat the taste of the free phosphorus; if exposed to the air the phosphorus oxidizes, and the less efficient phosphoric acid is formed. Commonlythe dose may be increased by one or two drops daily until thirty are taken three times daily; the dose is then increased more slowly, one drop every other day, until forty or forty-five are taken each time, and in rare cases, if it agrees, even a larger amount may be given; but seldom has he given as much as sixty drops at a dose. As the disease yields the dosage is still continued, if well borne, even until the lesions have quite disappeared and superficial cicatrization has taken place.

It is well to watch patients very carefully while taking this remedy, noting the condition of the tongue and of the digestion, and with the least disturbance the drops should be stopped for the time, and proper measures instituted to restore the deranged functions. If there is any constipation or signs of liver disturbance he gives a mild dose of blue-mass, colocynth, and ipecac, repeated on the second night after; if then the bowel discharge has been free and the tongue is not coated the drops may be resumed at a smaller dose than when stopped, and the amount again increased, yet more slowly and cautiously.

In many instances the greatest benefit will result from the administration of full doses of nitric acid after each meal, well diluted, in the interval of cessation of the drops, say for a week, when they may be returned to as before. This course of nitric acid may be repeated from time to time with advantage.

When there is much heat and flushing in the eruption, it will often be better to give, in place of the nitric acid, the acetate of potassium, in doses of fifteen grains, with the fluid extract of rumex, and nux vomica, well diluted, half an hour before meals, as in acne rosacea. This he has sometimes seen to have a most beneficial effect upon the eruption, and when the phosphorus has seemed to have lost its effect on the lesions, he has observed it to take hold of them strongly after a course of a week or so of the acetate and rumex mixture.

Dr. N. D. Gunn contributes a paper on "Gastric Neurasthenia." Washing out the stomach, he states, will often relieve the patient when everything else fails. Change of air is also of use and, in the depressant form of the disease, stimulants and forced feeding are valuable.

Dr. D. J. Evans reports a case of "Dystocia due to Hydrocephalus." The child was born by the breech but it was necessary to reduce the size of the after coming head to allow of delivery.

Dr. C. F. Martin reports a case of "Ligature of the Femoral for Popliteal Aneurism, Subsequent Gangrene of the Leg, Amputation with Satisfactory Result." The remaining paper is the report of "Six Months Medical Evidence in the Coroner's Court of Montreal" by Drs. Wyatt Johnson and George Villeneuve, who were employed as coroners physicians during the period.

PERISCOPE.

MEDICINE

Poulticing the Ear.

Poulticing the ear may seem to be a simple operation, but there is nevertheless a right and wrong way of doing it, and it appears that the wrong way is the one usually adopted. Dr. Buck says that while heat is one of the best remedies in painful inflammations of the middle ear, and the poultice is one of the best methods of applying heat, as usually put on the poultice has little effect. What should be done, he says, is first to fill the external auditory canal with lukewarm water, the head resting on the unaffected side upon the pillow. Then a large flaxseed poultice is applied over the ear as hot as it can be borne. The column of water is thus kept warm and acts as a conductor of heat between the poultice and the inflamed surface.—*N. Y. Med. Times.*

Miliary Tuberculosis and Gummata occurring in the same Lung; Differential Diagnosis.

Dr. Eugene Hodenpyle (*New York Medical Record*, December 3, 1892), says the differentiation between miliary tuberculosis and small gummata is often exceedingly difficult. The following points of differential diagnosis may be emphasized, although, of course, there are many exceptions to the general statements made:

1. The history of tuberculosis in the one case, and of syphilis in the other, may be of importance.
2. The bacteriological examination is usually positive in tuberculosis, unless the tubercle are very old and fibrous; it is negative in syphilis.
3. Inoculation experiments are usually positive in tubercle, and negative in gummata.
4. Tubercles are usually present in considerable numbers, and are scattered throughout the entire organ and throughout the body; gummatous deposits are usually single, or are present in small numbers, and are confined to a single organ.
5. Tubercles are usually much smaller than gummata.
6. Tubercles show a marked tendency to undergo cheesy degeneration and to form cavities: gummata rarely become cheesy, usually drying up and undergoing calcification.
7. Amyloid degeneration is sometimes present in tubercles, but, so far as known, is absent in gummata. On section, the tubercles appear as round or irregular grayish masses, often soft or cheesy in the centre, and surrounded by a zone of inflammatory products.
8. Microscopical examination will show the presence of tubercle bacilli in the tubercles; but no characteristic micro-organism is present in syphilis. Giant cells are present usually in tubercles, and are usually absent in gummata.

The Changes in the Cardiac Ganglia in Acute and Subacute Endocarditis.

Kusnezow (*Arch. Path. Anat. u. Phys.*) concludes his lengthy and interesting paper as follows:

1. In acute endocarditis the observed changes in the cardiac ganglia occur in the form of inflammatory granulations, proliferation and swelling of the endothelium of the capsule, and albuminoid and fatty degeneration of the nerve cells.
2. The changes in the ganglia in the lower part of the auricular walls depend, in the main, upon the extent of the process of granulation by continuity of tissue from the valves to the fatty tissue surrounding the ganglion.
3. Vacuolation of the nerve cells was not observed in acute endocarditis.
4. Pigment degeneration of the nerve cells of the heart is not always a physiological appearance, and does not always depend upon the age of the individual.
5. In hypertrophy of the heart, pigment accumulations in the protoplasm of the nerve cells is a common appearance.
6. The alteration of the cardiac muscle, in the majority of cases, stands in no constant relation to the changes in the cardiac ganglia.
7. Only in rare cases is it possible to establish a dependence of the power of the heart upon the diseases of the cardiac ganglia, in a pathologico-anatomical manner, during life. —*Lancet Clinic.*

Blood Changes in Syphilis.

Neumann and Konried (*Wiener klin. Wochenschrift*) have made a study of the blood in all stages of syphilis with the following results:

1. The hemoglobin is diminished in the primary stage from 15 to 30 per cent. It remains diminished during the first part of the eruption and in early treatment, but as the mercurials are pushed it rapidly regains its normal percentage.

2. Older contracted cases of secondary syphilis have only from 45 to 75 per cent. of hemoglobin. The anti-syphilitic treatment in these cases increases the hemoglobin, but does not raise it to normal.

3. The late forms of tertiary syphilis are characterized by a low hemoglobin percentage, which improves under mercury.

4, 5, 6. The red blood corpuscles are not diminished in the primary affection, but when constitutional symptoms appear they are reduced one-third. Anti-syphilitic treatment brings them back to normal. Non-treated secondary forms have about one-third the normal amount, which becomes normal under treatment. In the tertiary stage there is some diminution. The number becomes restored by treatment.

7. The number of white corpuscles are diminished in proportion to the diminution of the red corpuscles.

A Variation in Type in General Paralysis.

Bullen's views on this point are (*Jour. of Mental Science*, April, 1893) that although in every particular the type of general paralysis cannot be said to have universally changed, yet it is probable that in some feature or another alteration is to be noted very generally, and that in some localities prominent changes are apparent in the whole form, and that in the following details we may especially look for evidence of variation:

1. Less pure and sthenic type of mania, with more infrequency of occurrence.

2. Greater frequency of primary demented cases, and an earlier onset of dementia in cases where emotional manifestions are primary.

3. Possible increased ratio of melancholic to maniacal symptoms.

4. Modification in the ages of patients attacked, in the duration of the disorder,and in its distribution as to sex.

5. Variation in the relative frequency in occurrence of convulsive and apoplectiform seizures; in a less sthenic character of the former, and in diminished frequency and fatal significance of them.

6. A possible concurrent change in the meningo-encephalic adhesions (post-mortem).

Tuberculosis Caused by Bites.

A curious and instructive case is recorded in a French contemporary. A women presented herself for treatment at a hospital under the following circumstances:—Six months previously she had been bitten on the index finger of the right hand by an epileptic who was suffering from phthisis. The wound resulting from the bite at first began to heal quickly, but subsequently by degress it commenced to ulcerate, and in the end it became distinctly tuberculous. Three or four months later the physical signs of tuberculosis became apparent in the lungs. Another and similar case is recorded where tuberculous ulceration of the finger resulted from a phthisical husband biting his wife. Auto-inoculation in tuberculous persons also seems possible. Terson of Lille mentions the case of a man who bit his tongue, and the small wound so resulting developed into a tuberculous ulcer, the man being phthisical at the time.—*Med. Press aud Circular.*

SURGERY.

Treatment of Appendicitis.

Dr. N. Senn concludes an interesting paper on this subject as follows:

1. All cases of catarrhal and ulcerative appendicitis should be treated by laparotomy and excision of the appendix as soon as the lesion can be recognized.

2. Excision of the appendix in cases of simple, uncomplicated appendicitis is one of the easiest and safest of all intra-abdominal operations.

3. Excision of the appendix in cases of appendicitis before perforation has occurred, is both a curative and prophylactic measure.

4. The most constant and reliable symptoms indicating the existence of appendicitis are recurring pains and circumscribed tenderness in the region of the appendix.

5. All operations should be done through a straight incision, parallel to and directly over the cœcum.

6. The stump, after excision of the appendix, should be carefully disinfected, iodoformized, and covered with peritoneum by suturing the serous surface of the cœcum on each side over it with a number of Lembert stitches.

7. The abdominal incision should be closed by two rows of sutures, the first embracing the peritoneum, and the second the remaining structures of the margins of the wound.

8. Drainage in such cases is unnecessary, and should be dispensed with.—*Cal. and Clin. Rec.*

New Operation for Bad Cleft Palate.

Mr. Arbuthnot Lane operated on a case of cleft palate by means of a method which he had adopted on a previous occasion. The child was two years of age. The upper lip, with the hard and soft palate, was cleft from before backwards, and the cleft in the palate was of such a nature that it was hopeless to attempt to close it by any of the usual methods. On one side the palate terminated by an oblique junction with the lower end of the vomer, whilst on the other side there existed only the alveolus, which above was directly continuous with the inferior meatus of the nose. Mr. Lane removed the mucous membrane from the margin of the hard palate on the one side, and on the other he stripped the mucous membrane from the inferior turbinated bone and from the inferior meatus, and so formed a goodsized flap of mucous tissue and periosteum whose base was continuous with the mucous membrane lining the inner asept of the alveolus which formed one boundary of the cleft. This flap was then made to cover in the cleft, being connected by a continuous suture with the opposing freshened edge. There was no possibility at the time of bringing the edges of the soft palate together, so this portion of the operation was postponed till the hard palate had developed a little. Nothing could have been more satisfactory than the result which was obtained from this method. Mr. Lane pointed out that it admitted of a tolerably wide application, though he had seen very few cases like the above in which it was so peculiarly applicable, and which were apparently not capable of being treated by the ordinary methods.—*Med. Press and Circular.*

ARMY AND NAVY.

U. S. ARMY FROM AUGUST 6, 1893, TO AUGUST 12, 1893.

Leave of absence for twenty days, to take effect upon the conclusion of his examination for promotion, is granted first Lieutenant James D. Glennan, Assistant Surgeon, U. S. Army.

First Lieutenant Charles E. B. Flagg, Assistant Surgeon, will proceed to the Yosemite National Park, California, for duty with Troop 1, 4th Cavalry, relieving Capt. Leonard Wood, Assistant Surgeon.

Upon being thus relievied, Capt Wood will return to his station, the Presido of San Francisco, California.

Leave of absence for one month, to take effect, about August 16, 1893, is granted Captain Henry S. T. Harris, Assistant Surgeon, Fort Keogh, Montana.

Leave of absence for one month, to commence about September 5, 1893 is hereby granted to Major J. F. Lauderdale, Surgeon, U. S. Army.

Leave of absence for three months, to take effect on or about September 4, 1893, is granted Major George W. Adair, Surgeon, U. S. Army.

Leave of absence, for one month, and fifteen days, to take effect, when his services can be spared, is granted first Lieutenant Frank R. Keefer, Assistant Surgeon.

By direction of the acting Secretary of War, the extension of leave of absence, on account of sickness, granted Captain Marlborough C. Wyeth, Assistant Surgeon, is still further extended two months on account of sickness.

Captain Marcus E. Taylor, Assistant Surgeon, having been found incapacitated for active service, by an Army Retiring Board, will proceed to his home and report thence by letter to the Adjutant General of the Army.

Leave of absence for one month, is granted first Lieutenant Alfred E. Bradley, Assistant Surgeon, U. S. Army.

Leave of absence for one month, to take effect upon the return from detached service of first Lieutenant Henry C. Fisher, Assistant Surgeon, is granted Captain Eugene L. Swift, Assistant Surgeon.

NEWS AND MISCELLANY.

A "Fair" Companion.

If you intend visiting the World's Columbian Exposition it is of the utmost importance that you learn how to see it to the best advantage, so as not to waste time and money.

To go into the Fair grounds without the aid of a person or guide "who knew it all," or with the use of an ordinary guide book would be very much like seeing Chicago through the aid of the City Directory, or landing alone at one of its various depots. You would be utterly lost, and as for relying on other visitors to tell you what you should do or where you should go, please remember that very few will be better acquainted with their surroundings than you, and the hurly-burly will give no one time to attend to other people's wants or wishes.

The book is called A "Fair" Companion, and is intended to obviate the necessity of a person accompanying you, as the Companion has been made a study and contains much better information than you would be likely to receive from a uniformed guide, for the reason that he would show you what *he* thought was of most interest, while this book shows *it all* and leaves it for you to select what pleases your taste. If you have but one day to devote to seeing the Fair, it tells you what can be done in that time and a choice of three plans how to do it; if you have two days, the work is divided into that time—also a six-day plan. The Companion will also be a valuable aid to the fortunate ones who may prolong their stay for weeks or months, as it gives in concise and consecutive form information that will save days of laborious travel around the grounds in the endeavor to become familiar with the location of buildings and exhibits.

By this means you can work systematically, avoiding loss of time in rambling over the grounds in search of something—you hardly know what—and seeing everything at the most opportune time.

This book has a large map of the World's Fair grounds showing all the roadways, pathways, waterways, buildings, gates, etc.

With the aid of A "Fair" Companion you can see everything to the very best advantage.

Price: Paper cover, 30 cents per copy; Flexible cloth cover, $1.00 per copy; Leather cover, $1.50 per copy. THE THOMAS FOREIGN TOURIST CO., 1512 Chestnut Street, Philadelphia, Pa.

THE MEDICAL AND SURGICAL REPORTER.

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ORIGINAL ARTICLES.

INEBRIETY.*

R. M. WIGGINTON, M. D. WAUKESHA, WIS.†

It is hardly necessary to state that this subject needs more than a passing notice. The drink problem of this country is of vast proportions. One million of arrests for drunkenness in the United States during the period of one year, with all its resulting misery and expense, is a matter well worthy the attention of the public. There is probably no question to-day before the peoples of all civilized nations, that is receiving so much attention as that of inebriety.

No matter how we look at the subject, whether as a source of great revenue to the state, as a political factor, as a great moral question or as an agent for the ultimate destruction of the physical and psychical organization of man, it is rapidly attracting the best thought of the thinking men and women of the world. States are adopting stringent rules. Norway is already leading the van with its national regulations. Christianity is uttering its most fervent appeals; philanthropists, philosophers and statesmen are racking their brains for a proper remedy; and even princes and potentates of the Eastern world are seriously considering the subject in all its aspects.

A subject so far-reaching and of such vast importance, a subject that has engaged the attention of the civilized world for ages; a problem so hard to solve, a problem so vital to our social fabric, a problem which involves the very life of the nation, a problem which has for its foundation the health, happiness and well-being of the individual, must of necessity deeply interest the medical fraternity of this country. The very nature and make-up of the medical mind, and the physician's duty in regard to preventive medicine and general philanthropy must naturally fit him for this work.

Already many of the best medical men in the nation have come prominently to the front in trying to evolve from their knowledge and experience a remedy for this great evil—an incubus which hangs like a pall over the human race, eclipsing all other evils combined.

In treating a social evil of this magnitude it is first necessary to understand fully its character and causation; and I regret that the time allowed will only admit of the briefest reference, and of the more cardinal points being given.

The physician in treating his patient first tries to get a correct knowledge of his case; in other words he must make a correct diagnosis. So it is with the subject before us; unless we get a clear understanding of the subject and reach correct conclusions, we shall go along groping in the dark, and no further progress will be made toward solving the problem.

Without further comment or argument we will state that it is pretty generally conceded now by the scientific world that

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* Read before Wisconsin State Medical Society, 1893.

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INEBRIETY is a disease. By this statement we do not mean to say that every one who takes a drink, but who can control or stop it, and does so; or that he who may even take too much under peculiarly tempting circumstances, or to drown sorrow and the like, (if he has no morbid desire or for taste for it), should be called *an inebriate.* So the alienist reasons when he says that every apparently suicidal act is not alone positive evidence that the person committing the act was mentally deranged. So we might reason in regard to the taking of chloroform, chloral, opium and the like, as remedies in disease, notwithstanding the bad effects to which they too often lead. It is only where the imbibation of these articles becomes a fixed and uncontrollable habit with the will power weakened or gone, that we recognize disease.

In treating of organized life, every deviation from a normal or healthy standard must be considered in the light of disease. This fact is recognized in the vegetable as well as the animal kingdom. No one is so familiar with this fact as the horticulturist, the agriculturist, or the breeder of fancy stock. So pauperism and the crime habit must be looked upon and treated as disease in the proper acceptation of the term; and until these facts are recognized and the proper remedies applied in accordance with rational and proved science we shall continue to be cursed with these unnecessary and remediable evils. Inebriety, properly so called, is a disease; and as such, is known by the same morbid phenomena, and is governed by the same pathological laws as other diseases are known and governed.

It is a psychosis; a species of insanity. It is a disease of the brain affecting the mind, in which the predominant and characteristic symptom is a weakening of the will-power and the mental faculties, hence a form of dementia. Not only this, but it is a *disease of the entire nervous and physical organization of the man*; no tissue, no cell escapes; all is involved in one common ruin. These facts are pretty generally conceded by the best men in the medical profession in this country and in Europe. As it is a disease we must deal with it as such, even as other diseases are considered, in regard to causation, treatment and prevention.

Causation: The causes of inebriety may be indirect or predisposing, and direct or exciting.

Of the indirect or predisposing causes, chiefest of all is that of heredity. We may quibble all we like over the term heredity—that a man is not born insane, or an inebriate, or a genius, or a criminal, and the like—but we *do* know, that birth *does* take place with these tendencies.

By heredity we do not mean to say that the child *will* of *necessity* inherit the *peculiar* disease or diseases of the parents, or that the child will *surely* turn ou at vagabond because the parents belong to the defective classes; for we frequently see children born of diseased parents, parents with marked physical, mental and normal defects, who under proper environment grow up to excellent manhood, who go through life perfect specimens of temperance, sobriety and moral integrity, but we tremble with uncertainty when we learn the history of these cases, for we know for a *certainty* that the offspring is *always* born with these tendencies strongly marked.

Environment often "makes the man or damns the child." This reënforces heredity, and by these two great laws health as well as disease is governed. By these processes nature makes her selections and moulds her atoms into things of physical, mental and moral beauty and utility.

Knowing what we do of heredity and its subtle laws and processes, we must conclude that the fundamental or ultimate principle lies first in the primitive cell which dates from the time of conception. During the process of cell segmentation, proliferation and growth which follows fecundation, this morbific element or principle is capable of transmission from cell to cell all through uterine life, and when child-life begins, the same parental reflex is carried on until the child reaches man's estate, *when he stands forth a complete composite picture of his progenitors.*

Now, when we remember that man in his physical organization is simply an aggregation of cells, and that every manifestation of this wonderful combination, whether it be physical, mental, moral or emotional, is simply a reflex of active cell growth, we can readily conceive how an *unhealthy* cell growth may contribute to disease. As a result we get an unhealthy physical organization, a weak vacillating and unsteady mind, a loss of will power, the emotions excessive and the morals low. This tendency of parent to reproduce itself, is a law governing all organic life.

Next in importance as predisposing causes may be mentioned sex, nationality, the drink habit, pauperism, ignorance and the crime habit. In regard to sex, for obvious reasons, it is vastly greater in the male than the female.

Nationality no doubt cuts a large figure in the production of inebriety. The drink habit, through the influence of heredity and environment, is beyond doubt, the most prolific of all causes. Pauperism and the crime habit act in the same manner.

Next in the order of causes may be mentioned the neuroses (which more properly come under the head of predispoing causes) such as insanity, epilepsy, chorea, progressive general paralysis, hysteria and the like.

The exciting or direct causes of inebriety are many. To summarize we might say that *environment* was the exciting cause and covered the whole subject; that all the surroundings and conditions of life of the individual together act as a cause. To particularize we might mention: Bad associations, lack of education, occupation, over work, ill health, insufficient food and clothing, excitable temperament, disappointments, financial disasters, loss of dear friends and *unpleasant home surroundings.* This latter condition might be considered as the most prolific of all the exciting causes of inebriety.

It commences in early youth and drives the child from the home hearth, and for want of careful nurture, parental training and Christian influences, the boy seeks his pleasure in forbidden places and is soon on the road to ruin. Thus we see that *heredity* and *environment* are the two great factors in the production of inebriety.

Treatment: After what has been said of inebriety and its cause, it will be readily understood that it is a disease, not like the ordinary ailments with which the physician is brought in contact, but rather a complicated complex affair in which the whole organism of the individual has been laboring under pathological conditions, perhaps, for years. Upon close inspection, it will be found that the executive or will power is weak, that the mind is vacillating and unsteady, that the morals are depraved and the emotions are beyond control. By further examination the bodily health will be found considerably below normal. The man is unable to stand fatigue. He is either too fleshy or considerably emaciated. The heart becomes excitable, the kidneys congested and undergoing pathological change, the liver slowly taking on hypertrophy, atrophy and cirrhosis, and the lungs assuming that peculiar form of interstitial hyperæmia so common with chronic alcoholism. His power to do or to command is departed; his ability to grasp a subject and the power of concentration and retention of thoughts is almost nil. He readily sinks into all kinds of vice and immorality; trifles look like mountains. He is easily elated and as easily depressed. His love of family is changed. His health, habits, tastes, inclinations, yea, even his *desires*, have all become morbid and depraved, and you behold the man only a semblance of what he should be. Every tissue of his body has become diseased.

Under these circumstances, may I ask, is it possible that any one remedy or medicine, or any combination of medicines alone can be relied upon as a cure? In other words, can any morbid habit or taste, like the drink habit or the morphine habit, etc., be cured by medicine alone?

Again, is it possible that a habit, in which the entire man presents a complexity of pathological phenomena, can be recovered from in the short space of three or four weeks?

Does not every honest and intelligent physician turn his back indignantly upon such sophistry? To be sure, the patient might be placed upon proper treatment in that short space of time, and if continued under proper surroundings or environment may ultimately recover. Because a man suddenly ceases to get drunk is no sign that he is cured of inebriety, as evidenced by the large number, who, under temptation, so readily return to their former habits of dissipation.

Inebriety is a very complex disease, and presents a variety of morbid phenomena which require for its treatment and cure the proper application of all those rational and approved remedies and appliances which experience has taught us may be relied upon for the restoration of health. Medicine alone will not do it; confinement will not do it; and imprisonment is worse than useless, as statistics abundantly demonstrate.

As the entire physical, mental, moral and emotional faculties of the individual are diseased, he is a complete wreck. He becomes incompetent as a citizen, and should be cared for and treated as a ward of the state. The public has a right to demand this: first, for the welfare of the ward; second, as a public protection; and third, as a matter of economy. In regard to the welfare of the inebriate, no one can question the propriety of proper treatment. Unaided, he is unable to rise above his degradation. He has fallen so low and has become so helpless, that he sinks deeper and deeper, day by day, in the wretched temptations and debaucheries thrown around him on every side, that he finally becomes lost to all sense of shame, or obligation to the public as a citizen, or to his family as a provider and protector. He holds his miserable existence by tolerance only. He has forfeited all rights as a citizen and ought to be treated as an incompetent. He already has an unsavory record in the police courts, has often done duty in the House of Correction, and has cost the public many an expensive law suit. Under such circumstances no one can question the right and duty of the state to take charge of this class of defectives. As a public protection, it is also the province of the state to take care of itself. The right-living public have rights that the evil doer must respect, and no community can carry self-respect until this prerogative is recognized and its mandates obeyed. The evil effects, humiliations, inconveniences, losses and injuries, not to mention the vast number of murders and other major crimes that so often follow as a result of the drink habit, are too numerous and exasperating to go unrebuked much longer. In regard to economy, the mind in its wildest conceptions can form only a faint idea of the vast array of figures required to represent the loss in monied value to the public from the drink habit. We need only refer to the nearly one million arrests made in this country during the past year from this cause alone; and this has no reference to the fabulous collateral expense growing out of the same cause. In regard to *treatment,* the cardinal point to be kept constantly in view, and which is paramount to every other consideration, is the welfare of the unfortunate victim; the danger to the public and the matter of economy being considerations of minor importance, and will follow as a natural sequence. What seems to be the great need, is a just and systematic law by which these unfortunates may be judged incompetent and placed in properly constructed institutions, built and governed by the state, and maintained by the state, and in part, possibly, by the inmates when able to pay. This want is recognized by private individuals in the form of the so-called "Keeley Cures," which are springing up all over the land.

These institutions should harmoniously combine the medical, moral, educational, industrial, correctional and custodial qualities. They should be built with due regard to proper classification. The inmates should be committed under the indeterminate sentence, and a clause admitting patients voluntarily should be inserted in the law, but being subject to the same discipline.

Each institution should possess sufficient land, as farming and gardening should be made strong features in the treatment. With proper machinery, a limited amount of manufacturing could be carried on. With the exception of a foreman or two, the institution should be carried on by the inmates, thus making it, as far as possible, self supporting. The institution should be properly officered; and at the head, under the general supervision of the state board of control, should be placed a physician of known intelligence and experience, with assistants under whose immediate charge the entire workings of the establishment should be placed. In regard to specific treatment, (which we have no faith in) the physicians in charge should be well qualified and the treatment left to them. All the moral influences of a first-class institution should he thrown around the inmates.

The industrial and educational features of the establishment should receive marked consideration. In fact, herein lie two of the most pronounced features of the treatment, especially with the younger classes. In regard to correction, I think nothing of a so-called punitive nature should be used, simply the correction that naturally inheres to a well regulated hospital where a strictly humane and disciplinary regimen is faithfully carried out. The custodial feature of the institution will always be a pronounced one. Herein will gather a large class, without friends or kin, aged and homeless, weakened in body and mind, and beyond any hope of recovery. Like other diseases, not all can be cured, but all can be benefited. And while all may not be cured, these unfortunate creatures can be kept away from all harm to themselves and others, and the public relieved from the burden of arrests, suits at law growing out of personal encounters, crimes of all kinds, murders, divorces, etc., and many other bad conditions of society the direct result of the drink habit.

There will be three classes represented; the upper, the middle, and the lower. The upper class will include all those from the higher walks of life; the educated, the wealthy, those in professional life, higher official life, etc. From this class, coming as it does from a higher social scale, we must expect the largest per cent. of recoveries. However, this does not always follow, for we occasionally observe the most degraded coming from this class. From this higher social scale will "graduate" the so-called "Keeley Cure" cases. As a class, they have better organization; their surroundings are superior; they have more to live for; and they are received back into life, into the arms of friends and comfort, and as a matter of course be much more likely to remain cured than those coming from the more defective classes. The middle class will comprise that large body of workers and toilers, principally in agricultural, industrial and mechanical pursuits, from which we may reasonably expect many recoveries, but not in such a large proportion as from the higher walks of life. They represent, on an average, a somewhat lower grade in the social scale of life, and as a result will yield a less number of recoveries. To this class will naturally fall the principal industrial pursuits of the institution, through which the establishment will be made, at least, partially self-sustaining.

To the third and last class belong all that vast horde who have been born in ignorance, poverty, wretchedness and vice, and comprise what is commonly called the "criminal classes." They have not the *ability* or even the *desire* to rise above the low level to which they were born, and from this class we must expect but few recoveries. Custodial treatment, with the moral influences of a well regulated institution thrown around the unfortunate, will be about all that can be done for this class.

And now what shall we say in regard to prevention. We may state that it is vastly superior to cure. As in other diseases, our first duty is in the line of prevention. The science of prophylaxis, which is rapidly coming to the front in all forms of disease, is no less important in the one under consideration. Here is an evil that surpasses all others combined, and it is preventable. It is a disease whose chiefest cause is hereditary. Every medical, reasonable and legal remedy should be used to prevent its spread and propagation. It is claimed by good authority that sixty per cent. of all drunkards inherit a tendency to the disease. That is, they inherit an unstable nervous and physical organization which predisposes to inebriety. I think the above is a low estimate. In my somewhat extended experience in caring for this unfortunate class of humanity, I have seen but few inebriates who did not inherit some mental, moral or physical obliquity, if careful pains were taken to look up the ancestry. I believe seventy-five per cent. is nearer the figure. Now, if this large per cent. of drunkenness comes from inheritance as a predisposing cause, and if we were sure that this diseased state of society is preventable, and that large numbers can be cured, how essential it is that every responsible and legal effort should be made to suppress the evil. The law of inheritance, as already shown, is a wonderful process. By it, in the one instance, all the virtues and beauties of a perfect parentage are reflected in the child; by the same law, in the other instance, all that is hateful, hideous and damnable may be handed down from the parent to the offspring to the perpetual torment of future generations.

To prevent the propagation and spread of this evil, the state should have a guiding hand. The two chief factors to be considered are isolation and the interdiction of marriage with the defective classes. These two problems are far-reaching in their nature, but not beyond the hope of accomplishment in the near future. As soon as the unfortunate is isolated and his surrounding changed, improvement begins. He is out of harm's way, and no longer in a position to hand his diseased organism down to other generations. He is provided with a good home and taught industry; he is placed in an atmosphere of morality and taught to respect the rights of others. No sane person can question for a moment the right and duty of the state to care for its own defective classes. In regard to the interdiction of marriage, it will be a more difficult question. It might be a hard matter to determine or to draw the line and say who should be debarred: yet this can be done through the combined action of good men, governed by a just and humane law, which should be national in character. When the national government shall see fit to create a department of health, with a cabinet officer at its head and with proper branches throughout the different states and territories, these public health problems will all fall naturally under this department and can be equitably adjusted as the needs of each seem to require. Already the lax and unstable character of the marriage laws of the different states is being investigated by legislators and others who have the best interest of the nation at heart, and before long we hope to see the United States enjoying a marriage code, uniform and national in character, which will forever put a stop to the present lax and almost indiscriminate mixing of the sexes. Under one grand department of health all the sanitary measures of the country should be placed, including the vexed one of immigration, disinfection and preventive medicine, epidemics, and defective classes of every description, and by just and humane laws, in time, eradicating forever these mental, moral and physical imperfections from the land.

The next (possibly the first) great factor to be considered in regard to the prevention of inebriety, is the presence of alcoholic beverages throughout the length and breadth of our country. To suppress or regulate the manufacture and sale of alcohol is now, and has been, taxing many of the brightest minds in Christendom. A business of such vast proportions as the liquor traffic of this country, cannot be regulated except through the wisest, most deliberate and persistent action of the state. The manufacture and sale of alcohol cannot be stopped but it *should* and can be limited. A business that has been allowed to grow to such vast proportions under the laws of the state, and thereby fostered in its growth, cannot now be suppressed without compensation, and to purchase the plants by taxation, the people would never submit to. But it seems to me by the very nature of their tolerance, the state, by legislative enactment, has full power to limit the *sale*, and the *demand* would regulate its manufacture. South Carolina, I believe, is now entering upon an experiment in this direction, which will be watched with much interest. Norway, it is said, has proved the success of governmental control. At present, in this country, a license sufficiently high to control its sale is by many thought to be the only way out of the difficulty; and even this can only be done where the citizens are educated up to it. Again, when any incorporated industry injures its employes or the public, there is ample means of redress and compensation. With just reason the same rule may be applied in regard to individual or public damage done through the liquor traffic. This is a broad, difficult but interesting subject and time has allowed me only to touch upon the cardinal points. If I draw the attention of the profession a little closer to this subject, the object of this somewhat desultory paper will be accomplished.

References: Maudsley, Davis, Crothers, British Medical Journal, International Prison Congress Literature, London Lancet, Howle, Clark Bell, Lord Coke, Moyer, Doering, Lord Hale, Blandford, Tuke, Griesinger, and many others.

Cocktail Bitters.

The *Bottler's Gazette* claims excellence for this:

℞

Spirits	30 galls.
Bitter orange peel	8 lbs.
Cinnamon bark	8 "
Cudbear	4 "
Canalles	1 lb.
Quassia chips	½ "
Gentian roots	½ "
Grains of paradise	½ "
Cloves (whole)	¼ "
Colocynthin	¼ "

Bruise, and macerate for ten days, when it is ready to be filtered and bottled off.

For Pityriasis Rubra.

℞

Calaminæ	gr. xl.
Zinci Oxidi	℥ij.
Olei Olivæ,	
Acquæ Destillatæ	āā ℥j.

Misce et fiat applicatio.

CLINICAL LECTURES.

COLD ABSCESS OF FOOT; UNDERLYING TUBERCULOSIS OF TARSUS; AMPUTATION OF LEG; TUBERCULAR ARTHRITIS OF KNEE; AMPUTATION OF THIGH.

ROSEWELL PARK, A. M., M. D., BUFFALO, N. Y.

This patient comes before us with the history that, a year ago, he sprained his foot, and that, following the injury, a swelling gradually appeared on its upper surface and the function of the member was lost. He has also lost in flesh and strength and has been obliged to abandon his work in a tailor-shop, while, for three or four months, he has gone about only with the aid of crutches. Two days ago, on admission to the hospital, a large fluctuating tumor was found on the dorsum of the foot; he was coughing and raising material which contained tubercle bacilli and the diagnosis was made of incipient phthisis with cold abscess of the foot. On holding the heel with one hand and pressing against the toes with the other, or on twisting the foot on its axis, pain is produced. The tuberculous disease must, therefore, involve the bones as well as the soft parts of the foot, but its extent can be known accurately only by exploration. I purpose, therefore, evacuating the contents of the abscess and exploring the diseased focus. If the bones are in such a condition that there is no probability of future usefulness for the foot, amputation will be performed. The field of operation has already been shaved and enveloped in an antiseptic dressing although amputation has not yet been decided upon. The Esmarch bandage is applied over bichloride towels to facilitate matters if worst comes to worst, and the cold abscess is opened by a longitudinal incision, exposing a jelly-like mass of tuberculous debris which is not, properly speaking, pus. It will not flow, but is scooped out with the sharp spoon. The diseased process has gone so far that it is necessary to make a counter-opening on the outer border of the foot, and the tissues are so œdematous that serum exudates along the path of the knife. You can see the tendons of the extensor longus digitorum and the muscular mass of the extensor brevis. The tuberculous debris extends more into the tarsus and I have scraped out a mass of rotten bone. This is the condition that I expected to find on account of the tenderness and complaint of pain on manipulating the foot, but if I had not made a free incision, I would not have found the tunnel that leads down to the deep-seated focus of disease. The operation is much like following a vein of ore or coal, which is sometimes thin, sometimes thick, but which must be dug out to the end if the mining or the surgery is to be thorough.

Although it is a pity to sacrifice a member on account of a limited focus of disease, experience has taught that amputation is the safer treatment for such trouble. If I try to save the foot, the probability is that the tubercular processes here and in the lung would react upon each other so as to aggravate the phthisis and render amputation unavoidable later. You see I am washing my hands again as carefully as when the operation was begun, for they have been infected in handling the tuberculous material and I do not want to carry any septic element into the fresh wound which I shall make in removing the foot.

The best operation for removing a foot is that which takes a line at least four inches above the ankle. This fact we have arrived at through the experience of patients and instrument makers, that the best artificial feet can be applied to such stumps. With the long amputating knife, I make a circular sweep through the skin and superficial tissues down to the muscle. After allowing this layer to retract, I cut through the muscle and then, with the dry dissector, separate the soft parts and periosteum from the bones. This takes a little more time but is of advantage to the patient in affording a periosted covering for the stump of the bones. The interosseous membrane is now severed, the retractor applied and the bones sawed. You will notice that I bevel off the anterior border of the tibia with the saw and trim away with cutting forceps any little uneven points that are left. The next point in the operation is attention to the blood-vessels and nerves. Both the anterior and posterior tibial nerves, and any smaller ones that may be seen, are separated from the sheathes of the accompanying vessels,pulled down as far as their elasticity will allow,and severed. If this precaution were not taken, they might be included in the cicatrix and cause a painful stump. After ligating the blood-vessels, I insert deep buried sutures of cat-gut in order to unite over the ends of the bones the firm fibrous structures which make a good foundation for a comfortable stump. No irritating or irrigating fluid has been used on the wound except a spray of hydrogen peroxide, the policy being now to keep wounds clean from the beginning rather than to deluge them with antiseptics. The deep sutures relieve all tension on the skin, which is completely closed with catgut, leaving no provision for drainage, as I anticipate no need for it. Iodoform is powdered over the line of sutures, the stump is annointed with sterilized vaseline and dressed with antiseptic gauze and cotton. Over all is applied rubber tissue held in place by a dampened gauze bandage. Considerable pressure is thus applied so that no hemorrhage need be feared when the tourniquet is removed. In twelve or fourteen days, I expect to remove the dressing and find the wound virtually healed. Of course, if fever or any other disturbance should occur, the dressing would be changed sooner. The stump will be kept rather high for the first twenty-four hours. A laxative will be given if necessary to keep the bowels open.

This patient presents a condition in most respects similar to that illustrated in the last case. He is thirty years old. Three years ago he was in the hospital with osteitis of the head of the tibia. There are two scars just below the knee,whether from ignipuncture or incision into the abscess I do not remember. At any rate, he recovered from the trouble and enjoyed good health for some time. A few days ago, however, he returned with a very serious and painful affection of the knee. The leg cannot be completely extended, it swerves outward and there is a tender spot over the inner condyle of the femur, externally marked by a redening of the skin. He lies most of the time in bed with his knee on a pillow and his hands grasping the top of the bed, so as to steady himself for his knee "jerks" every little while; i. e., he has frequent muscle spasms. He has had some elevation of temperature, his lips and face show his serious condition, and he has had so much spasm and jerking of muscles that his sleep has been disturbed. There is a severe acute exacerbation of some chronic inflammation about the knee. On account of the tenderness and slight enlargement of the internal condyle of the femur, we may locate the trouble in that place. You will note that the enlargement has pushed the knee outward and increased the angle which the leg makes with the thigh. There is some atrophy of the limb and the subcutaneous veins are quite prominent, indicating obstruction to the return of blood in the deeper veins. Under chloroform the leg relaxes somewhat, but cannot be fully extended. Let us compare the two legs. Atrophy of the muscles above and below, makes the affected knee more conspicuous; there is, however, some actual thickening over the internal condyle. The inflamed area and the distended veins are brought out more plainly by contrast with the healthy side. The patient has suffered so much that he is perfectly willing to have anything done that may be necessary, even to the loss of the limb. What I shall do will be, first, to find the focus of softening in the condyle and remove it with the curette if possible. If I find a more extensive involvement of the structures of the joints, I shall resect, and if there has been so much destruction of tissue that it seems hopeless to try to save the knee, I shall amputate. The last alternative I hope will not be forced upon me, but I shall plan my first exploratory incision so that it can be utilized either for resection or amputation as necessary. It is made obliquely downward and outward from the internal condyle, over the front of the patella. The patella is firmly attached and, as I cut into the soft tissue over it I find it thickened and certainly tubercular. On opening the joint, I find a large focus of softening and acute inflammatory exacerbation of the older lesion in the condyle. The question is no longer between curetting and resection, but between resection and amputation. The patella, at any rate, must be sacrificed, and I grasp it in lion-jaw forceps and cut it away from the femur to which it is attached by osseous formation. The tubercular tissue extends all the way around the front of the joint to the outer side. If resection is practiced here, it will be necessary to remove an immense amount of tissue, the leg would be shortened three or four inches and would be stiff. Even then, I should not feel confident that all the diseased tissue had been eradicated. I shall let the final test be the appearance of a sawed surface of the condyles after the first step of a resection. The sawed surface looks better than I had feared, but I have exposed a quantity of tubercular debris in the inter-condylar notch, involving the periosteum.

Amputation is manifestly necessary in this case and I shall not perform it in any typical manner but so as to save as much as possible of the thigh. I cut forward to the bone from behind so as to join the previously made anterior incision. The periosteum is scraped upward on the femur and held, along with other tissues, by the retractor before the bone is sawed through. I find after removing the bone that the great sciatic nerve has been severed just at its division. It is pulled down and cut as were the other nerves to prevent its entanglement in the cicatrix of the stump. The vessels are secured and the tissues united in the usual way. If I had known in the beginning that amputation was inevitable, I would not have proceded in this way, but to have set about a typical amputation of the lower part of the thigh would have been to condemn the limb without a trial.

COMMUNICATIONS.

THE DIAGNOSIS AND NOMENCLATURE OF FEVERS.*

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The aim of this paper is not to discuss the general subject of fevers. It is not hoped to throw light on the subject. Its remarks will be mostly confined to the first week of typhoid, and a variety of fever which the general practitioner of this state, at least, finds most commonly in his practice. It will consider the difficulty of the conscientious practitioner in diagnosing this class of fevers. at the outset. When once diagnosed it will show how impossible it is to correctly name, taking the various text-books as a guide.

It is a fact that various types of disease are endemic and more or less confined to certain portions of the world. Moreover, it may be very difficult for a text-book to describe accurately the various diseases of each section. It is barely possible that the type of fever which the writer has most to deal with is confined to the Lake Erie region of western New York; or that he has been guiding typhoid fever for the past twelve years to a successful termination and has been stultifying himself by giving it a less dreaded name.

The classification most commonly found in our text-books and fully described is—typhoid and typhus, malarial remittent and intermittent, pernicious malarial, relapsing, yellow fever and the eruptive fevers of childhood. In other works we find a description of bilious remittent, typho-malaria, gastric, mucous, nervous, hysterical and simple continued fever. We shall exclude from our discussion yellow fever, relapsing, typho-malarial, hysterical, the eruptive fevers and malarial fevers, except as the term malaria may have some bearing upon the question under discussion.

A few words in the first place in regard to diagnosis. All observers agree that it is not possible in many instances to diagnose typhoid before the end of the first week. The conscientious physician, who believes in calling things by their true name, would rather test the confidence of his patient and his or her friends by delay in naming the disease, that appears brilliant by making an early diagnosis and be obliged to change it at the end of a week. He shrinks from getting the dishonest credit of carrying to a successful issue a case of typhoid when it is a variety very much simpler and easier to manage. It is true, I believe, in many instances that the individual interpretation of symptoms often modifies our diagnosis, and to find a case of typhoid with all the typhoid symptoms as described by Louis in 1829 is a rarity. I was once placed in a very embarrassing situation by the hesitancy of a brother practitioner in concurring in a diagnosis of typhoid fever on account of the absence of some of the symptoms we usually find. The case was diagnosed as an ambulatory type of typhoid, not coming under observation until the second week of the disease. The situation soon becoming serious, counsel was called—one of the brightest and most successful practitioners in that section. On account of the presence of constipation and some other irregularities, he would not admit of the correctness of my diagnosis. The embarrassment was soon discovered by the family and the ignorant father who all along had insisted that his son had "canker on the stomach," naturally considered it a point in his favor. In due time an enema was decided upon. It was successful and the young man had not been in bed but a few moments when he uttered a piercing cry from the presence of pain in the right iliac region. I immediately said, "doctor! perforation!" My face evidently indicated alarm. With a ringing laugh at what he terned nonsense, he refused to admit the possibility of such a complication. It took a long time of active work to control the intense suffering. Abdominal distension, tympanites, fecal vomiting, collapse, and death followed in the usual order. And yet never would counsel admit that it was typhoid fever or the complication, a perforation of the bowel.

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*Read before the Medical Society of the State of New York.

Many times have I wished that the consultant had not been such a devoted advocate of the typical cases of Louis.

In regard to the diagnosis of typhus, it is only the initial cases of any epidemic which appear puzzling. Being a member of the Charity Hospital staff of New York, I remember well the onset of the epidemic in the winter of 1881. At lunch one day a house physician said he had several cases in his wards which he could not diagnose. One after another joined in describing similar cases they were puzzled over, until it was found there were twelve such cases. Before the day passed it was found we had twelve cases of typhus fever.

Dr. J. Lewis Smith was my visting physician. About the time of the above incident I asked him to see a case I was uncertain about. Walking up to the bedside of the patient he said, "just listen to his lungs, doctor." As I was bending over for the purpose, he spoke quickly, saying, "doctor, don't do it! Send that man to the typhus fever hospital on my authority. We have already sacrificed too many young men in this hospital from that disease." The man died of typhus the next day.

The type of fever I wish more particulary to call your attention to, with the hope that it may elicit discussion, is a type more common than typhoid in my experience in the Chautauqua District of western New York.

By hastily glancing over my memoranda for the last few years, I find forty such cases for illustration; cases which at no time in their progress seemed to admit of the diagnosis of typhoid fever. In several instances, it seeming wise to take extra precautions, counsel was called and concurred in the diagnosis, by excluding typhoid. In the great majority, the course of the fever was such an uninterrupted, uneventful one that counsel was not considered and very little anxiety was felt as regards prognosis. It seemed a very comfortable sickness. Some being, of course,. in the recumbent posture would feel like the average woman on the second day after parturition—perfectly able to go to work. They all recovered. They were equally divided between the two sexes. As regards age, seven years was the youngest and sixty-five the oldest. Twenty-two were under thirty years of age, nine between thirty and fifty, and twelve between fifty and sixty-five.

The duration was from seven to forty-two days, the former period being very exceptional, the latter quite common. The greater number, by far, average twenty-one days. It might have been the myopic vision of the observer, but all of the cases seemed to run in cycles of seven.

Their course was seven, fourteen, twenty-one or thirty-five days duration.

The initial symptoms were precisely like typhoid; slow, insidious and progressive. It was impossible to make a diagnosis, excluding typhoid, before ten days. Then it was reached by an absence of the characteristic symptoms of the latter.

Headache was complained of in some instances, but in most of them not a pain was experienced from the beginning to the end of their sickness. A dull, listless expression of the face, hebetude of mind, furred tongue, loss of the sense of taste and constipation were usually found.

The pulse, normal at the beginning, would average between eighty and ninety during the course, rarely going above one hundred, except in the convalescent stage. Then it was a pulse of exhaustion, not a febrile one.

The temperature gradually rises as a rule, although a high temperature in the beginning is more frequently found in this than in typhoid fever. It reaches its height at the end of the first week, maintains it one, two or three weeks, as the case may be, and as gradually subsides. The defervescence occupies a week. It is not quite the characteristic curve of typhoid. It is more like going up a hill running along a plain and going down again. The afternoon temperature, which persists from day to day and week to week, is from 102° to 103½°. The patient is left weak and emaciated and the convalescence may be more or less protracted.

Probably some have said, ere this, why not call such cases a mild form of typhoid? In answer I would say that the absence of rose-colored spots, iliac tenderness and gurgling, diarrhœa, brown dry tongue, delirium and all the symptoms which would indicate serious conditions has not permitted; this absence of the very symptoms which all authorities agree upon as being characteristic of that disease. The above symptoms, one and all, are in the cases we diagnose as typhoid.

It is always our custom, however, to disinfect the stool at the beginning of every continued febrile attack. It gratifies one that this precaution has been observed when what appears to be a simple case in the beginning turns out to be a serious typhoid. It is, too, a very easy matter to continue the disinfection as a precaution, even though typhoid has been excluded.

What, then, shall we call this type of fever? What do the text-books call it? At the bedside, when once the point is reached, that we can safely exclude typhoid, we say something like this—If some not over-scrupulous physician had this it would be called typhoid. Another would call it malarial. Another remittent. Another gastric. Another bilious. Another typho-malarial, and still another simple continued fever. Each one would be naming it as best he could from his own experience and with no text-book to guide him.

Suppose we call it malarial. Flint, Loomis, Bartholow, Reynolds, Pepper and Niemeyer admit of the term malaria only in connection with the malarial fevers of the south. All observers agree now that in malarial remittent, malarial intermittent, and pernicious malarial fevers the parasite of Laverau is found in the blood and that pigment is deposited in every organ. The same objection is found to the name remittent fever, as all the authorities consulted unite in saying that between remittent and irremittent fevers there is a close relationship and that they are interchangable. Some claim there is no distinction whatsoever. Bouilland terms any attempt to distinguish them as a "nosological superfœtation."

Surely neither the term malarial nor remittent, as now interpreted, can be used, as there is no parasite of Laverau in the blood of our patients.

It is a fact that in a practice of over eleven years, the first patient, having a continuous residence here, is yet to be treated for any disease complicated by true malaria; and the first malarial dose of quinine is yet to be given. Why not call it bilious fever? We frequently have, and this seems to be the name most generally recognized. But we feel like apologizing every time the name is uttered. Moreover Flint says, "The term 'bilious' is superfluous and so far as it has any significance tends to perpetuate a pathological error."

The name typo-malarial cannot possibly apply, as the malarial element is certainly wanting—besides,so few admit of the existence of the fever named such by Surgeon General Woodward that further consideration is not necessary.

How about gastric fever? Lebert says this is an infectious disease, and found in an epidemic form. This is certainly not true of the fever in question. Olsen considers its existence as by no means certain and that a great majority of all cases occurring in this country are a mild type of typhoid. As Niemeyer describes gastric fever the picture is more nearly portrayed, but he gives a higher range of pulse than is found in this type. Moreover, there is not pain or pressure in the epigastrium and the variety of gastric symptoms that he describes. Another proof that it is not the fever in question is that the ephemeral fever of a day, mucous and catarrhal fevers are all subdivisions of the variety gastric fever.

Hutchinson, in *Pepper's System of Medicine,* gives a simple continued fever of one to twelve days' duration. After debating the question of its existence, he comes to the conclusion that there is such a fever. This cannot be our type as it is too short in duration. He also says that it is marked in the severity of its initial symptoms. The temperature rises four to seven degrees within a few hours. As to two of the causes of this fever, viz., excesses at table and extreme mental or bodily fatigue, there does seem to be a similarity, for in the great majority of cases a bad breath, foul tongue, a stomach which has been asked to digest more than it has been made able, an inactive liver and an overloaded bowel are the conditions found.

In two of the cases given, the symptoms were especially indicative of exhaustion of the nerve centers. One was a lady of fifty who had lost home and property, her husband, her daughter in puerperal convulsions and a son in a railroad accident within a few years, the two latter being close together. She had the continued fever of more than average duration, but her tongue was clean throughout her whole sickness and all of her sickness seemed to be more the result of a shock.

Another one, that of a young man of nineteen, by dissipation in every form had burned his candle very fast. The fever lasted twenty-three days. The tongue was perfectly clean throughout the whole course. Nature, in each case, seemed to take this method of giving their bankrupt nerve centers a chance to recuperate. They seemed to be types of what might be called nervous fevers.

In a discussion on malaria in the New York Academy of Medicine in March, 1891, Dr. Francis Delafield described four types of fever as he found them. One type resembled somewhat the fever under consideration. He says, "Patients who suffer from a continuous fever lasting usually about two weeks, not often less, not often much longer; the febrile movement well marked, 103° to 104° F. when at its height, which was usually in the afternoon; there was usually a great deal of headache, with more or less perspiration. There were cases of this kind which it seemed impossible to distinguish from typhoid—the fever did not seem to be affected by remedies—it ran its course and stopped when it got ready." With the exception of the considerably shorter course the description of the type by Dr. Delafield comes nearer to the one in question than anything we have yet found. It may be the same fever and yet have a shorter duration on account of its different location. I regret that Dr. Delafield gives no name to this form.

I have taken altogether too much of your valuable time in tearing down. I am frank to say I cannot construct. But since by the general practitioner, the term remittent is already so frequently used with this type I will suggest the name, *Northern Remittent Fever.*

Splenotomy Performed by Monod.*

He (*Bull. et mèm. de la soc. de chir. de Paris*, T. XVIII, p. 668) reports a case of splenic abscess, its causation being somewhat doubtful to him. The chessy masses were found mixed in the fluid contents of the abscess, suggesting tuberculosis. Microscopical as well as bacteriological examination gave negative results regarding tuberculosis; even vaccination of guinea-pigs with the pus failed to produce the expected result, micro-organisms in no case being present. Ecchinococcus was also excluded after careful examination.

A Vehicle for Iodide of Potash.

Delavan recommends essence of peppermint and milk as an agreeable menstruum for the administration of large doses of iodide of potash.

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*Translated for The Medical and Surgical Reporter by Marie B. Werner, M. D.

SOME FORMS OF INSANITY AND QUASI-INSANITY IN CHILDREN.*

CHARLES K. MILLS, M. D., PHILADELPHIA. †

Mental disease in children is not very common, neither in a few of its types is it very rare. It has received but little discussion from writers on psychiatry and pediatrics, but it is of sufficient practical importance to claim the attention of general practitioners as well as specialists. Cases both of juvenile insanity, and of what I would term quasi-insanity, are confused with other affections and conditions, as with hysteria, with bad temper, with vice, with the delirium of fever, with meningitis or brain tumor, and even with surgical affections.

Mental disease in childhood is, as a rule, limited to a few forms, and a little consideration will show that this might be expected; as for the full development of certain types of insanity it is requisite that the faculties of the mind should themselves be evolved to a certain point. In a strict sense, the existence of mental disease presumes the previous presence of mind; hence some would exclude from insanity proper idiocy and imbecility due to congenital structural defect, although for practical purposes this is not necessary, as mentality is supposed to be the inherent attribute of the race. Paranoia, or primary delusional insanity, will not in its typical forms be observed in children under puberty; but abortive or imperfectly developed paranoia is not an uncommon juvenile affection, and some of its varieties I shall include under quasi-insanities. Some children are pursued and worried with imperative conceptions, insistent ideas, and morbid impulses and propensities; and, after all, as these are but delusions in the making, if they have any systematization in their fabric, and are not merely the ebullitions of mania or melancholia, the child is suffering from a form of incomplete or quasi-paranoia. I thus refer to paranoia at the outset to emphasize the fact that insanity in children is simple in kind in accordance with the simplicity of the mind itself.

I shall not consider idiocy or imbecility except moral imbecility briefly. Kerlin,[1] who has added so much to our knowledge of moral imbecility, has sometimes used the term juvenile insanity in describing moral imbecility; but it is better to speak of both moral imbecility and moral insanity in children, as all forms of mental alienation in childhood may be properly called juvenile insanity.

The varieties of true insanity most commonly observed in children, are (1) melancholia; (2) mania; (3) choreic insanity; (4) hysterical insanity; (5) cataleptic insanity or cataleptoid insanity; (6) epileptic insanity; (7) moral insanity; and (8) certain quasi-insanities—forms of morbid fear and of morbid doubt, perversion and impulse. We have also so-called etiological varieties of insanity in children, as dementia due to inherited syphilis, febrile and post-febrile, reflex and masturbational insanity; but these and other classes founded on causation, may according to inclination or stand-point be regarded as forms of insanity, or as groupings of cases which indicate simply the important causes of some of the clinico-pathological types.

Let me first say a word or two about melancholia. It is always necessary to distinguish between monomanias or paranoias and melancholias; but genuine, uncomplicated melancholia is undoubtedly seen in children. Sometimes hallucinations are present with the mental depression and sometimes not. Melancholia in a child seldom assumes the extreme form which is so frequently observed in the adult; but now and then a true agitated melancholia or melancholic frenzy is observed. Ordinarily a child suffering from melancholia will be blue, sad, anxious, weeping, restless by day and by night, and wanting in the liveliness and changeability of children. The delusions so common in adults, as of self condemnation, of the unpardonable sin, of coming to want, or of fatal organic disease, are often absent; but children who are brought up in a morbidly religious, or in distressing surroundings, sometimes exhibit a delusional state of a religious and painful character. The varieties of melancholia most frequently observed in children, are probably the hypochondriacal, and the excited or agitated.

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*Read before Pennsylvania State Medical Society, 1893.

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[1] Kerlin: A Clinical Lecture on Idiocy and Imbecility, *Medical and Surgical Reporter*, May 20 and 27, 1882.

Suicide in children is not commonly due to melancholia, although it is occasionally, and in these cases an inherited taint is often present. Children like adults are now and then driven to melancholia and suicide by want of care and ill treatment.

Mania is, on the whole, the most frequent form of juvenile insanity; but, as a rule, it is less tenacious, less violent and more curable than in the adult. Much has been and much might be written about it, but I shall here limit myself to a few remarks on the somewhat frequent occurrence of true mania in children who are imbecile or partially imbecile, or who suffer from some form of cerebral arrest which gives rise to spastic palsies, a subject of considerable practical interest.

One year ago I first saw a girl of 12 years old, the victim of a form of infantile spastic paralysis affecting the right side, but especially the upper extremity. When seven months old she had one severe spasm, and none afterward. Her mental development was moderate in degree; but not what it should have been for a child of her age, but she had been docile, obedient, and affectionate, and without any moral perversion. I saw her last one week ago. During little more than a year she passed through an attack of acute insanity having four more or less distinct periods or stages, respectively, (1) of depression or sadness; (2) of excitement; (3)of torpor or lethargy; and (4) of gradual convalescence. In the first, she was moody and melancholy and had delusional religious tendencies. She passed in five or six months into a stage of gradually augmenting mania, in which she was highly excitable and emotional, destructive, inclined to stealing and all sorts of michief; she took the most violent dislikes to her nearest relatives and friends. She wished to be always on the go, and was in a state of constant unrest; at times she had screaming spells, and attacks of stubborness which would last for hours or days; she would talk incessantly, and would not sleep until twelve or one o'clock, and then would awake again at four.

After four months of this mania, without special treatment, her parents finding it practically impossible to administer remedies, she passed into a third stage of great lethargy and torpor, which was ushered in by what her mother termed a severe illness of three weeks with fever. The lethargic period lasted for more than three months. She lay in bed all day long, would not talk, slept much of the time, ate when she was fed, but did not ask for or seem to care for food. Gradually she came out of this state, her complete emergence requiring another period of about four months, at the termination of which, one week since, I found her as plump and well as she had been two years before; her general health perfect for her, although her menstruation had not yet come on. As one result of this attack, however, she seems to have marked increase in the spasticity of her affected arm; and in fact she was brought to me the last time chiefly for consultation as to the propriety of operating on the biceps and other tendons of the upper arm for the relief of the increased and annoying tonic spasm. When she was six or seven years old the tendo Achillis of the affected side had been cut with considerable apparent advantage to her in the use of the limb.

This patient, among other defects, had a high degree of hyperopia, one-eighteenth, with deep physiological excavation of both optic nerves, as determined by Dr. C. S. Turnbull, who believed that in ordinary cases, such an amount of far-sightedness would account for many reflex nervous symptoms, but was not sufficient to cause the acute mental attack.

This case is given somewhat in detail, as a lesson in the diagnosis and prognosis in similar cases, of which I have seen several. One, now a man in years, but less than a child in mind, has had several such attacks out of which he has emerged in nearly but perhaps not quite his old condition.

Some understanding of the subject of moral insanity in children is of great importance to the general practitioner, who is almost invariably first consulted by anxious parents about the unfortunate victims of these disorders. It is probably better that a distinction should be made between moral imbecility and moral insanity in children as well as in adults, although commonly this is not done. The subject of true moral imbecility is the victim of heredity, and his condition is manifested as soon after birth as it is possible to recognize deficiencies in the moral sense through conduct. I have become only too familiar with this class of cases, presenting chiefly moral symptoms, cases which must be recognized as the subjects of disease, and the special care and treatment of which are forced upon us by every scientific and humane consideration. Such children are incorrigible to reproof and training. Punishment has no effect upon them, or only will be heeded to aid their escape from pressing annoyance or discomfort. Much difference of opinion has arisen with regard to the exact nature of such cases. One contention is that a case of pure moral imbecility or moral insanity does not exist, and that close investigation will always show some intellectual disorder. The difference is probably one of terms. Recognizing such words as morality and immorality, as expressing distinct ideas, no reason exists for not speaking of moral departure or moral disease. The doctrines of moral insanity and moral imbecility are, as Tuke claims, in full accord with the rules of evolution and dissolution as laid down by Spencer and Hughlings Jackson. I could, were it worth while, fill this paper with illustrations of moral imbecility similar to four cases which have been reported by Kerlin,[1] the first an illustration of the incipient prostitute, the second the incipient burglar, the third a hereditary religious hypocrite and egotist, and the fourth a confirmed juvenile confidence man.

In moral insanity as distinguished from moral imbecility, the patient has apparently been born in full possession of the so-called moral sense, as well as of the intellect. The perversion of the moral or affective life has been brought about by injury, disease, or vicious habits. Extraordinary perversions of character have been recorded in considerable number as due to acute fevers in children, as after scarlet fever and malarial fever.

The best method of treating moral imbecility must be sometimes met. In most genuine cases, education and philanthrophy, kindness and cruelty, the Sunday School and the reformatory, the asylum and the penitentiary, will equally fail, or perhaps I should not say equally, as in a very few instances, strengthening of the weak and imperfect coordinating centers may be impossible. To the typical cases, to the vast majority of cases that would come under this designation, belongs the term incorrigible. Some of the most practical and most experienced authorities as Hack, Tuke[1] and Kerlin,[2] believe that education in its ordinary meaning should be largely withheld from this class. The former says of them: "The early detection of these cases is not difficult, they should be subject to life-long detention, their existence can be made happy and useful, and they will train into comparative facility and harmlessness if kept under a uniform, temperate and positive restriction. The school-room fosters the ill we would cure; in teaching them to write we give them an illimitable power of mischief, in educating them at all except to do physical work, we are adding to their armament of deception and misdemeanor." As Kerlin puts it, we should refuse them the ordinary routine of education because "we believe that in educating moral imbeciles we are training experts for the later role of so-called moral insanity."

QUASI-INSANITIES.

In a philosophical sense sanity and insanity are relative terms whether applied to children or adults Certainly not a few may be properly regarded as on the borderland between mental health and disease, and these are perhaps best classed as examples of partial or quasi-insanity, forms of mental disease which in a certain manner and degree have the attributes of insanity. Quasi-insanity better expresses the idea than such terms as, partial or pseudo insanity, or borderland cases, for the prefix "quasi," as used in English, indicates that the thing spoken of resembles or has the attributes of something without being the latter in full sense. Some of the best examples of quasi-insanity are to be seen in those suffering from those affections which are shown by morbid doubts and morbid fears, and have been described under many names as *folie du doute*, introspective insanity; or as phobias in endless train—claustrophobia, agorophobia, pathophobia, pantophobia, etc.

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[1] Kerlin: *Medical News*, March 19, 1887, p. 326-327.

[1] Tuke: Dict. Psychol. Med.

[2] Kerlin: Op. cit.

Some knowledge of these phobias, and of what they import might be of value to many of my brethren not neurologists—to gynecologists and surgeons particularly. They are psychoses, which lead sometimes to oöphorectomies and laparotomies, to uncalled for operations and treatments of various sorts on all parts of the body. They are abortive or imperfectly developed mental disorders. Sometimes they are as transient in duration as they are limited in phenomena; but in other instances a few elementary deficiencies or disturbances may persist without much change or increase, through life. Many of these cases, like certain morbid impulses, belong under the general head of paranoia. They have been described not only as morbid fears or phobias, and as morbid doubts or abulias, but also as emotional monomanias, and even as forms of neurasthenia. They are fundamentally dependent upon the domination of the mind by morbid concepts and insistent ideas.

They are sometimes observed among young children, although more common after than before the period of puberty. There most striking illustrations occur in those who have not been subjected to any physical or mental strain sufficient to break down a healthy organization. Persistent fear of the monomanical type occurring in children is rarely due to overwork at school as is frequently supposed. The cause is generally in the child's progenitor or progenitors.

Not infrequently several of the so-called varieties are present at the same time, in the same case, and some cases belong to a class which has been well described as pantophobia, or fear of everything.

As to cases observed in comparatively young children, Hurd[1] reports one from an account written by the patient herself. When about twelve years old, she began to have strange fancies, as fearing that the blood flowing from a cut finger would harm those who came near her. Later, dressing, walking out of doors, eating, were all greatly interfered with through the same morbid ideas. She feared contagious disease because she might communicate it to others. The insistent idea changed from time to time, but seemed to spring always from the emotion of fear. She eventually recovered. Hammond[1] cites from King, of Sedalia, Missouri, an interesting case of pyrophobia in a boy of ten years old. Day and night he was infested with fear of this kind. On one occasion when the morning was cool he succeeded after a contest with his mother in opening the stove door and pouring a bucket of water over the fire. He is said to have been cured by quinine, the bromides, and the use of evaporating applications to the head.

A boy, 11 years old, developed what was practically a pantophobia, although his disorder exhibited itself chiefly as a pathophobia, or fear of disease. He was kept almost constantly in the hands of physicians. Sometimes his morbid ideas revolved around real affections of slight importance; sometimes his fears and suffering were due purely to morbid conceptions and insistent ideas. Now his eyes were the source of morbid dread, and soon his limbs were the seat of rheumatic pain; he narrowly escaped, after solemn consultation, a laparotomy for "typhlitis," a case of strange metastasis as the typhlitis was probably in his head. To a moderate degree he suffered from mysophobia, spending unusual time at his ablutions, teeth-cleaning, dressing, and in the care and treatment of his clothes. Anything in the nature of a symptom or a disease mentioned in his presence was likely to take possession of him. His morbid notions and apprehensions were fed and encouraged by the unceasing attention of members of his family. He was the only son of a widow, and was under the tutelage of a mother, a maiden aunt, and a grandmother, probably the worst board of management for a pathophobic boy that could have been chosen by perverse fate. He was practically cured by taking him from his home surroundings, disregarding his complaints, forcing him to do things on time and after the manner of others, at the same time carefully but not obtrusively looking after the general health.

Another boy, at the age of ten, began to develop the scrupulous and mysophobic type of monomania; in fact he was, as so many of these cases are, an illustration of an admixture of several of the so-called classes of morbid fears. He was constantly worrying about many things that he said and did in his intercourse with others. If left alone, he would spend hours in bathing and washing himself; and often imagined that he had been polluted or would contaminate others. The symptoms were in many respects like those of the lady described by Hammond,[1] and to whose case he first applied the term mysophobia—who could touch nothing without being irresistibly impelled to wash her hands,and who in many other ways was tormented by the fear of contamination. This boy improved greatly under mental discipline,out door exercise and careful tonic medication.

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[1] Hurd: Cited by Stearns in Lectures on Mental Diseases, 1893.

[1] Hammond: Treatise on Insanity in its Medical Relations, New York, Appleton & Co., 1883.

It may be necessary sometimes to separate a form of *juvenile dementia the result of inherited syphilis* from idiocy and imbecility,whether of syphilitic or other origin, which may commonly be done by the fact that the dementia usually comes on after the child is four or five years old, and therefore when the mental condition has been determined not to have been that of idiocy. In rare cases, it happens that a juvenile or infantile dementia occurs when the child is two or three years old, so young that its true mental status has not been fully determined. With this word of caution as to the possibility of inherited syphilis showing itself in a child otherwise healthy in the first year or two of its life, most of the cases of this form of dementia, will be comparatively easy of recognition. A family history of syphilis will often but not always be obtained. Often the upper incisors will be pegged and notched, and cicatrices at the angles of the mouth, and the characteristic physiogonomy be present; the child will have attacks of keratitis, choroiditis, or iritis, or a history of snuffles, or of rash; and sometimes epilepsy will have developed.

Masturbation Insanity as occurring both in children and adults has been both over and under-rated, but on the whole, the tendency has been to the former rather than to the latter. Some alienists almost deny that this vice is ever the true cause of insanity; holding that it, like the insanity is due to the neuropathic state of the individual, or that at the most it is merely a concomitant or an aggravating cause. My experience leads me to believe that while, as is known to almost everyone, the vice is extremely common, especially among boys, it only in rare instances is the true cause of mental disease, but that these instances, though rare must be recognized. Of recent writers, Spitzka[2] has laid the most stress upon masturbational insanity. According to this writer, the typical masturbational psychosis occurs between the thirteenth and twentieth year, and therefore at a time which just removes the subject from consideration in an article on diseases of childhood proper. Occasionally, however, the same symptoms and conditions are observed before puberty, although the dementia then is more like a true imbecility. Infantile insane masturbators are more liable to epileptiform attacks than to outbursts of mania.

TREATMENT OF SCARLET FEVER.*

W. C. HOLLOPETER, M. D., PHILADELPHIA.

It seems like a work of supererogation to read before this society a paper on the treatment of scarlet fever. Yet medical science has grown within the past few years, and is growing with such phenomenal rapidity, that it would seem profitable for us to pause for a moment on some occasion like this, and review briefly what we have gained to combat so formidable a disease.

The general tendency in the treatment of all diseases, is growing more and more decidedly preventative in character. This is especially true of the eruptive and contagious diseases and we are succeeding, in a great measure, in limiting their spread. Within the last decade, while we have yet our annual visitation of measles and scarlet fever, we do not have such widespread devastations as formerly. The large cities always contain a certain proportion of diseases of this character, and it is a source of frequent wonder that where so many thousand of the unclean are huddled together, we should not have more disastrous epidemics. The solution of this question is found in the fact that more care is exercised on the individual cases—preventative measures are more carefully observed and enacted by the physician and nurse. Not only is this true in house epidemics, but the treatment of the individual cases is more certain in this way of escaping the not the less important sequels.

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[1] Hammond: Op., cit., p. 425.

[2] Spitzka: Cyclopedia of the Diseases of Children, Vol. IV., p. 1047.

* Read before Pennsylvania State Medical Society, 1893.

I have been induced to make these preliminary remarks by observing, retrospectively, with what marked success I have conducted many severe cases of scarlet fever through the most trying and depressing illness. My plan of treatment is very simple. I insist upon rigid, systematic bathing and inunctions, and I continue them even until complete desquamation has taken place. I have by this means had the pleasure of witnessing their complete convalescence without a single sequel.

In glancing over the vast literature of the subject, accumulating and growing more unwieldy every year, I am forced to acknowledge that I have nothing new or strikingly original to announce to you; yet I am startled with the vagueness and uncertainty of the instructions given.

Bathing, in scarlet fever (when it is mentioned at all) is recommended by over a score of our best writers, and our latest text books speak of it as a mode of treatment, yet in such an indefinite and uncertain manner as to preclude any real information, or give the busy practitioner encouragement to resort to it; or, if he should, no positive rule as to method, or the exact technique as to the mode of procedure. In the classical work of Thomas Watson, the prince of observers, and the commencement of modern scientific medicine, now over fifty years old, he coyly hints in the treatment of scarlet fever, "that, if the heat of the surface be very great and distressing he should not recommend the cold effusion, but cold or tepid sponging would be very refreshing and beneficial." This statement seems to hold good at the present day in an uncertain and dreamy way among general practitioners, and is the echo found in every work on practical medicine. The battle-cry of sponging in scarlet fever is universal, yet so vaguely is it touched upon by our best writers, I fear it is not practiced at the bedside by the majority of our medical men.

By actual inquiry I have been satisfied that the majority of our medical men do not give their instructions, as a rule, for the thorough sponging of their scarlet fever cases. They know or feel that they would meet with some objections from the family, or if not open antagonism, the order is partly, if not entirely, omitted. This is due to the old and prevailing theory, found among the laity, that fevers require warmth and sweating, and which has so firm a grasp on the general mind that the doctor usually fears that he will not be able to remove it nor gain his end. I know we have ourselves, as a profession, to blame for the reluctance with which our families accept our methods. When we have discovered the beneficial results from some mode of treatment, we are too prone to overreach our mark, and frequently insist upon an unpleasant method. There is no occasion, except in extreme cases, for ice or wet packs. There is no good to be gained by injurious fussiness.

If we quietly, but firmly, insist upon the patient being most thoroughly sponged, daily or twice daily, with carbolized water, one part to 60, or bichloride of mercury, 1 to 8000, or salt water, or alcohol and water at a temperature of 70 to 100 degrees, according to the amount of fever, and should we remain to witness the process occasionally and thus demonstrate at once its utility, we will speedily convert the patient and his family to our way of seeing the great good to come from the treatment.

This, gentlemen, may seem to you as a more than twice told tale, yet if careful inquiry be made I am quite positive that it will appear that your instructions to bathe have been respected more in the breach than in the observance. Systematic bathing and inunctions protect the body from the more disastrous breakers far ahead of the patient—the numerous sequels that may handicap him for life. I feel that this method of treatment is our most certain prevention of ear, nose and throat trouble, and the thorough annointing I believe to be a prophylactic measure against scarlatinal rheumatism.

My method of conducting a case is briefly as follows: I am in the habit of isolating, in an upper room, all of my cases of scarlet fever the moment a diagnosis has been made. The room is stripped of all possible hangings and superfluous furniture, and it should be large and well ventilated. No unnecessary visiting should be permitted. The nurse, be it any member of the family, or otherwise, should wear a washable dress and should not mingle with the family unless the clothing be changed or thoroughly disinfected. In the room, if it should be a severe case involving the throat, I keep the gas burning, or a small alcohol lamp, so that steam may constantly be generated. In the boiling water, I frequently add carbolic acid or oil of eucalyptus; this saturates the room very pleasantly, and at the same time, I believe, limits the extent of the contagion.

The patient is now thoroughly sponged with tepid salt water, or any of the antiseptics suggested above, three or four times a day, if the temperature should require it. Immediately following the sponging process, I order the inunctions, which consist of cosmoline, menthol and carbolic acid, ten grains of the latter to one ounce of cosmoline, after the plan of J. Lewis Smith. This combination is exceedingly agreeable to the surface, brings comfort and ease to the patient, and at the same time protects the sensitive surface. Carbolized water, 1 to 40, thoroughly shaken together, may be used to sponge the surface and followed by cocoa butter is also very agreeable.

A point I wish to mention is in regard to the proper disinfection of the physician himself, which, I am sorry to add, is frequently neglected. I find that it is unwise for him to visit other cases, children especially, without protecting himself as well as others. I invariably generate chlorine gas and allow it to go through my clothes thoroughly before I go in other families. This simple process I accomplish in a few minutes by placing a drachm of powdered chlorate of potassium in a saucer, and add a similar quantity of hydrochloric acid; this I place on the floor and stand over the vapor of chlorine as it arises until it penetrates all my clothing, then with the free use of the whisk, and a thorough hand washing I feel that I am clean enough to enter home or any sick room non-contagious.

In regard to the strictly internal medication, I prefer phenacetine for older children, combined with quinine, in capsules. Acetanilide for younger children. I generally give one-half as many grains as there are years in the child's life. When medicine can be exhibited in the form of capsules I always prefer to combine it with quinine to overcome the tendency to depression. Phenacetine and acetanilide act charmingly in controlling the nervous element, relieving headache and fever, promoting diaphoresis, and inducing refreshing sleep. Acetanilide acts much quicker than phenacetine, but its effects are much shorter. I, therefore, choose it for young children, and exhibit it in the form of a powder. If the bowels should be to prid, I combine with the acetanilid, small doses of calomel and soda.

Several years ago, I attempted to carry out Professor J. C. Wilson's choral treatment in this disease, but was forced to abandon it. The taste was so acrid and lasting, especially on the denuded tongue, and irritable to the stomach, that I was forced to give it up. I fear that we have in this feature alone its most insuperable barrier. The belladonna treatment as a protective or preventative measure, I do not think has any longer a recognition among the profession at large. Those remedies, purely antiseptic, administered internally, have not given promise of their utility as yet. Sulpho-carbolate of zinc and of sodium which, by their breaking up in the system and liberating carbolic acid, cannot be used in a sufficiently large dose to meet with success. The syrup of phenic acid is used by many physicians, but their success as yet does not seem to warrant it being classed as an efficient remedy.

In my estimation, the most thoroughly scientific treatment of scarlet fever, and the simplest to be found, is in the prophylactic measure of thorough isolation, bathing and antiseptic inunctions, with rigid care and attention to the possible appearance of the many sequels. The care of the nose and throatand, eventually, of the ears, will require all the skill of the medical attendant. I have found it absolutely necessary, if I wish to see my case fully recover without any unpleasant after results, to commence at once, in the early history of the case, to give careful and constant attention to the nose and throat, thus preventing much trouble and danger later on.

I instruct the attendant to use a small atomizer filled with warm water containing bicarbonate of soda in solution, about 20 grains to the ounce. If decided inflammation should occur, I use a solution of peroxide of hydrogen, one part to five of cool water or glycerin, and follow it with an oily preparation, such as liquid alboline containing menthol of five per cent solution. Mulford has a most excellent combination called Blandin compound, which is copied after Carl Seiler's Dobell's tablets, and which has the advantage over the aqueous solution in that the antiseptic remedies are in an oily solution, and are more soothing to the inflamed surface.

If the patient cannot tolerate an atomizer, I frequently make the application of the antiseptic oil by means of an aluminum applicator direct to the posterior nasal spaces. A thoroughly faithful attention to the removal of the secretion of the nose and throat, will prevent accumulation, and hence prevent regurgitation up the eustachian tube, with all its associated ear troubles. In this way I am sure diphtheria can be prevented from gaining its first lodgment; and, if it gains any at all, little trouble is experienced with this dreaded disease. We must keep the already inflamed surface thoroughly aseptic. If, however, pain in the ear should indicate the extension of the trouble up the eustachian tube, we must redouble our efforts. Trouble may take place, not from our failure to remove effete material from the nose and throat, and this, by rendering the inflammatory exudate as little as possible, but the desquamation within the eustachian tube itself may be quite beyond the reach of our detergent wash.

The external auditory canal may become blocked by desquamating epithelium, and this must be removed by gently sponging it out. The crude method of dropping laudanum and sweet oil in the ears is to be condemned, as it serves as a nidus for the collection of dust and dirt, independent of the rapid accumulation of dead epidermis. Since I have given careful attention to the management of nose, throat and ears, as explained above, I have had little diphtheria complicating my scarlet fever, and rarely otitis to confront me later on, as unpleasant sequels.

Scarlatinal rheumatism, I have encountered in but a small proportion of my cases, and then it was of a transient character, leaving no damaged heart valves behind. I am inclined to contribute this fortunate result to the faithful use of daily bathing and inunctions, long continued, or at least until after completion of desquamation. I think this is especially born out by comparing the cases occurring in my private practice within the last five years with those prior to that time, or those less fortunately situated, or those, especially, occurring under my observation in dispensary work.

The last, and most constantly occurring in scarlet fever, is the sequel, known as nephritis. Acute desquamative nephritis is regarded by most writers as a necessary entity, the catarrhal inflammation of the uriniferous tubules bears to scarlet fever the same relation as the bronchial inflammation occurring in measles, and known as acute bronchitis. It is true that the specific poison of scarlet fever is peculiarly obnoxious to the kidneys. It is largely eliminated through them,and here hinges the scientific part of the treatment of this disease; the more active we keep the skin, the less danger is likely to occur to the kidney. If the urine is examined throughout the whole course of the disease we will find in the early stage, that it grows less and becomes more laden with the waste of the body, at times nearly suppressed by mechanical blocking of the uriniferous tubules.

If now the skin is not invited to act to its fullest extent, we will soon find our patient reduced to a comatose state. Free bathing has the happy effect of vicariously eliminating and removes the undue pressure placed upon them. It is unscientific treatment to exhibit digitalis in any form during this stage without taking into consideration the pathological condition. It is like forcing a large cork into a bottle too small for it. Unload the effete material through the skin or bowels and you relieve the damaged kidney. The infusion of digitalis is happily indicated later or when the kidney commences to act.

From what has been thus briefly outlined, I may conclude that in the treatment of scarlet fever:

1st. While we possess no specific treatment for scarlet fever, I am hopeful that we will soon obtain one in the light of our present knowledge; and until we do so, systematic bathing and inunctions will be found to rescue the largest percentage.

2d. Careful antiseptic treatment of the throat and nose during the whole course of the diseased will reduce the possibilities of diphtheria to the lowest, and render otitis less frequent.

3d. Scarlatinal nephritis may be escaped by the treatment suggested above, combined with a milk or at least a fluid diet.

Finally, it is constantly observed that the unpleasant sequels are cropping out long after the physician has ceased visiting the case. We are indebted to our own indifference for many serious kidney troubles, should they arise, if we do not control our cases for a long time after all acute symptoms have subsided.

SOCIETY REPORTS.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, July 7th, 1893.

THE PRESIDENT, DR. T. L. MCDERMOTT, in the Chair.

Dr. Wm. Bailey presented an essay on

BLOOD PRESSURE.

(See page 277 of REPORTER, August 19th.)

DISCUSSION.

DR. D. T. SMITH: It seems to me by reducing this matter to the underlying principles and following them, we can find an explanation of a great many points that would require a considerable time to elucidate.

The prime thing is the *cell*—the heart is a machine that is worked by the cells of the body through the nervous system, the nervous system acting mainly as the medium. What is it that impels the heart to send the blood through the veins? It is the requirement of the cells! There are few cases in which over action of the heart is not due to this. The exceptions are cases of tachycardia which, in a way not yet fully understood, is an abrogation of the nerve control of the heart inducing over-action. These cases are not very frequent, and I do not know the result of study as to the effect in the production of hypertrophy. In almost all other cases, over-action of the heart is caused by cells calling for an increased supply of blood. Whatever blood is needed is sent to a cell by the heart through the operation of the reflex apparatus, the cells calling upon the nervous system and the nervous system in turn compelling the heart to exert itself. The channel of the blood becomes more and more sensitive from the time it leaves the veins until it passes again into the capillaries; the right auricle is less sensitive than the right ventricle, the left ventricle less sensitive than the left auricle, the intima of the small arteries and arterioles being the most sensitive of all. The blood meets with increasing sensibility of channel wall until it reaches the arterioles which in some curious way, are commissioned to control the supply of blood to the cell. If the blood is normal and pure, the arterioles present slight tension, the blood flows quietly on and we have an even circulation. But the blood may be defective, may be poisoned from some cause. In that case the cells are displeased with it; the arterioles, acting upon this suggestion, close against it, while at the same time the cells are calling lustily for blood, The brain answers by compelling the heart to overwork itself to send the blood, and this is the foundation of nearly every case of hypertrophy. Hypertrophy is the natural result.

There may be another exceptional cause of over-work, as is in the case of an athlete, where the contraction of the muscles on the veins accelerates the circulation, but even here it is mainly because over-worked cells require an excess of blood that the heart is over-worked in supplying them. Again the blood may be too thin, as in cases of anemia, and the heart is overworked because the cells demand that deficiency in quality be met by increase in quantity.

As a rule it is not the heart that carries healthy blood, but the one that carries defective blood that works more than it should, notwithstanding that on all physiological grounds the heart ought to work less on bad blood. It would seem that in anemia, Bright's disease and pregnancy the heart ought to decrease in size instead of increase. But whenever the system is insufficiently nourished, it compels the heart to do more work and the question is just how far we ought to keep that up, how far we ought by therapeutic measures to goad the heart to increased action, when by so doing we are assisting to produce hypertrophy.

It is true that excessive action of the heart means, as a rule, increased blood tension. But we know that over-action of the heart does not always mean increased blood tension. The force may be wasted before the pressure reaches the arteries and arterioles. We may have an exceedingly hypertrophied heart and still have a soft pulse—still have defective blood tension.

So long as the system and the tissues call for blood, they need it and must have it or there is a lack of proper nutrition, and the natural conclusion is that no man with a hypertrophied heart is in good health. No man is in perfect health where the supply is not ample, or where the system is calling for more. The horse is not spurred when the rider is pleased with his gait. To prove that nutrition is never complete a man who has hypertrophy of the heart to an appreciable extent will always give out quicker than one who has no heart trouble—other things being equal.

As to the particular method of medication we should use in these cases, it seems to me if digitalis is to be given it should be in small doses continued for some time. I think better results can be obtained in this way than with large doses for a shorter time. Some writer on this subject claims that better effects can be produced with large doses of digitalis but I do not believe this is borne out by facts, at least it has not been so in my experience. However, I would be slow to give digitalis at all until nature should give up the task of effecting compensation.

A word as to relative tension: When tension exists under ordinary conditions we have usually, an over-strength of the heart, but certain conditions may have the internal tension increased with a weak or weakling heart due to contraction of the peripheral capillaries.

As to the result of tension upon the respiration: It is well known that a failing respiration is revived by blood pressure. All of us have watched, often with very painful interest, at a death where circulation at the wrist is imperceptible, extremities cold, where there is no sign of circulation except the slight beating of the heart, and wondered why the first rapid pace toward death is not continued. Something like it is also seen in cases of shock. A person receives an injury, or there is some marked impairment of vitality which renders the heart incapable of keeping up the circulation of blood to the entire system. As a result nature closes the external capillaries, which forces the blood back upon the brain and heart. The tissues of the extremities can very easily do without blood for a long time; the brain and heart cannot. The brain needs the pressure of the blood. The blood is prevented from circulating in the extremities in order that a relatively increased tension may affect the brain and keep up respiration. We can often assist in bringing on conditions of this kind by turning the patient and lowering the head; sometimes even by reversing the position of the patient, arresting the circulation in the extremities and forcing the circulation into the brain, which produces a condition similar to shock. Shock, indeed, may be regarded as the diminutive of death.

Dr. F. C. Wilson: I think too little attention is paid to the pulse since the introduction of the thermometer. The pulse and the tongue the older physicians used to watch constantly, perphaps selecting their medicines guided by the conditions they found there. I believe these are now often neglected. We simply put the theremometer under the arm and judge by the temperature, perhaps never feeling the pulse at all. Of course the pulse indicates, to a certain extent at least, the actual blood pressure. If we could apply different instruments for measuring blood pressure, it would be more satisfactory, but the practical physician has not time to do this and it can be done only in the laboratory of physiological science. Pressure is not influnced by the force with which the heart propels the blood current alone. Sometimes some of the influence of the force of the heart's action is lost thorough the insufficiency of the several valves of the heart. If a valve curtain fails to fit properly, part of the force of the current is expended in a regurgitant flow and thus lessens the pressure upon the onward current in the arterial system. When conditions of this kind exist they must be taken into consideration in the selection of remedies, and one may sometimes find it necessary to increase the dose in order to accomplish the desired end. The character of the capillary circulation must always be considered, as much harm might be done by goading the heart to increased action when over-distended because of obstruction in the capillary system, or because of regurgitation that may have occurred incident to insufficiency of the valves. If the chambers of the heart become over-filled and we attempt to cause contraction, it may sometimes bring about a fatal result. I think I have seen instances where sudden death occured from large doses of digitalis under such circumstances. The administration under such conditions of the nitrites and atropia, causing the dilation of the arterioles and capillary system through the sympathetic nervous system would be more rational and we could relieve the over-distended heart in this way. The passage of the blood current through the capillaries depends very much upon the condition of the blood itself and the relations between the blood and the tissues themselves. In the tissues that need blood, if the blood that is brought to them is good, an active interchange of material takes place and the blood current is hastened. On the other hand, if abnormal relations exist between the tissues themselves and the blood, there may be narrowing instead of dilatation, and obstruction produced. Instead of mechanical obstruction as occurs in obstruction of the arterioles, there is a species of obstruction for want of proper mechanical relation between the tissues and the blood current itself, which produces a delay in the circulation. Remedies that act directly upon the heart or directly upon the capillaries, would not relieve such a condition. It depends upon the blood itself.

Dr. J. A. Larrabee: There is a tension necessary in every atom of the body; with the preservation of tension in these atoms we have life, and separation of these atoms is indicative of dissolution. In fact, the relaxation which occurs is simply the giving up of the tension of the atoms; so that when life exists there *is* a normal tension of these particles, particle to particle, and in this we have an explanation of cell action. The matter of blood tension is important as regards the absorption of medicines. I think it would be well if we would give this matter its full bearing by saying that when we have a normal blood tension we may expect the absorption of medicines. The idea should be to administer drugs which will control the osmosis without which we cannot have a proper absorption of medicines in the system. The nerve supply to the heart, coming as it does from two sources, gives us two sources of failure. Since I have studied this question more closely I have found a great many cases where such disturbances have been on the other side, i. e. through the pneumogastric; cases where this failure was plainly accidental. We have here a change in the tension by the check nerve, an over filling of the ventricles, and where this is taken off we have excitation without the proper proportion of blood. In atheromata we have a lessened arterial tension and see what a wonderful change takes place in the heart muscle, how it becomes degenerated—pari passu with the changes in the arterial coats. This is a life saving change and I cannot think that we want increased tension in such a case. With increased arterial tension we get increased cardiac nutrition, hency the wonderful action of digitalis which should be limited to actual patulency, or lesion of the valves of the heart, and then only given up to the point of compensation. Fatty degeneration of the heart is a condition of reverse compensation and must be looked upon as conducive to the prolongation of life of the individual by protecting him from apoplexy.

In cases of Bright's disease I think we have the best example of what we mean by arterial tension increased by materies morbi circulating in the blood. There we have a plain exhibition of the contracted condition of the arterioles down to such a point that the heart in its endeavor to relieve becomes hypertrophied. The illustration goes further than in Bright's disease. There are many similar conditions; we have a stage in the course of fevers, and I speak especially with reference to the great fever, typhoid, where we have a condition of paleness of the skin with high temperature. Now, I think that very many of our appliances and very much of our therapeutics are in fault by these cases. There is a condition in the course of fevers in which the dilatation by paresis of the check nerve, pneumogastric, gives the relief that we desire. Here there is a call for nitroglycerine or atropina. I have seen such remarkable results from the administration of belladonna by the mouth to relieve the tension, but far better results may be obtained by a distinct dose of atropina hypodermatically when there is this condition of shock, which it really is; the paleness of the skin being relieved not by forcing the heart to overcome that resistance, but to aspirate the heart by dilating the vessels. I do not fear high temperature with redness of the skin as I do high temperature with paleness, and I believe this is the key-note to hydrotherapy.

In regard to agencies for restoring nerve action when it is diminished either central in the heart or central in the brain. We have means of stimulating the vessels, and only recently since the last paper was read I have had an illustration of carrying strychnia to the extent of $\frac{1}{12}$ of a grain, which was carried gradually to that point and not until I reached $\frac{1}{12}$ of a grain did I get the result desired. I believe that strychnia is one of the greatest agents known for threatened cardiac paralysis in fever, and I think it should be classed under the head of cardiac stimulants. This whole subject of arterial tension is one of which the general practitioner cannot know too much, and I can only regret that I have passed so many years of practice in the early part of my life without paying any attention whatever to it, and I believe others are of the same opinion. It is now with me as I believe it is with Dr. Bailey, and others who have spoken, in all the cases I pay particular attention to the pulse and arterial tension, and regulate my therapeutics upon this basis. Not by temperature alone but by pulse ratio compared with temperature.

Dr. J. B. Marvin: It is very hard sometimes to separate arterial tension from conditions of the heart. It seems to me there are two points that should be borne in mind at the outset. First, that causes outside of the heart may as well as hypertrophy give rise to increased tension, or causes intra-cardial may give rise to hypertrophy, but there is always defective action, then gradual dilatation and lowered tension. It is a curious fact, that Bright's disease is almost always associated with hypertrophy of the heart and increased arterial tension.

All troubles that have a poison circulating in the blood may cause increased arterial tension at the time, and cause an over-action of the heart. If one narrows the point down to the fact that nobody having slight hypertrophy of the heart is healthy, I do not believe you will find many healthy people. There is certainly a difference in individuals in regard to arterial tension. In children there is a marked increase of arterial tension, but you cannot make out any hypertrophy.

In regard to digitalis, I think I give less of this drug every year I practice medicine. I am satisfied that there are a great many conditions of the heart where digitalis is contra-indicated. In certain other conditions I believe it is our best so-called cardiac remedy. In Bright's disease I doubt very much digitalis is beneficial. It is fashionable to give the infusion—I think we have better agents. Certainly by the administration of digitalis in interstitial nephritis, we are goading the heart to increased action which has its effect upon the kidney, and we have already an excessive flow of urine. Why should we want to increase that? I believe a better result may be obtained in renal troubles by administration of the nitrites. In pneumonia I do not give digitalis at all and have not for a number of years. I give nitro-glycerine very frequently and I have prescribed it in $\frac{1}{100}$th grain doses every twenty minutes.

In typhoid fever and pneumonia I rely less upon the thermometer and more upon the pulse. I think we should keep a close watch on the pulse, should feel it frequently at the heart rather than at the waist, as we may be misled. If the pulse keeps below 100 or 120 to the minute, in a person of middle age in typhoid fever, I do not care what the temperature is. The pulse in pneumonia that alarms me most is the one that gets quicker every day.

Dr. Wm. Bailey: I have very little to say in closing. I did not of course enter into an elaborate discussion of this question, hoping to bring out some such discussion as we have heard. I did not refer to disturbance of tension as coming from diseased valves of the heart, where regurgitation is permitted. We all know the benefit of digitalis particularly in mitral insufficiency; nor did I refer particularly to such diseases as so-called Bright's disease in which the tension is very greatly increased. For a long while I have been of the opinion as expressed by Dr. Martin, that this form of so-called Bright's disease was not difficulty in circulation limited to the kidney but that the changes in the kidney, the growth of fibrous tissue, was at the expense of other organs as well; that the trouble was a universal one. Certainly it is this form in which we of necessity have hypertrophy.

The point I wanted to ask particular attention to was that it was sometimes more rational to modify the condition or size of the vessels than it was to endeavor to accomplish the work through the heart handicapped in this way. I presume the word "Handicap" is understood by all Kentuckians—the best horse is made to carry the most weight in order to give the "scrubs" a chance of winning the race. In other words in my opinion it is better to dilate the blood vessels by proper medicines than to endeavor by increasing the power of the heart to force it to carry the blood through the contracted capillaries. This was the point I wished to make in the paper by asking you to consider the physiological action of digitalis and the nitrites. I believe a proper administration of the classes of drugs represented by the two mentioned—digitalis and nitroglycerine—will bring as good results as any medicine that I know of. I am fully satisfied that often times we could do very much more good by opening or dilating the capillaries, thus increasing the size of the vessels through which exit is made, rather than by stimulating the heart to increased power. We see this most markedly, I think, in such diseases as angina pectoris, where the tension is very greatly increased and the relief of nitrate of amyl is universal. The good effects are noticeable by the first inhalation of nitrate of amyl in the phenomena we call angina pectoris.

I am not inclined to express myself as fully and freely as others have done in regard to the use of digitalis. We cannot solve the problem in a single discussion, and we should carefully study the heart's action, administering remedies which will best assist it in performing its duty. In writing my paper I did not enter into minute details in regard to the proper amount of blood that each portion of the body should receive, nor follow the matter still further and see it was received. I think every day we should be more and more inclined to study the natural causes of disease in getting a clear indication for treatment; taking all these questions into consideration I believe we will make more satisfactory progress. I think that the outlook for the general practitioner is bright, notwithstanding we have not kept pace perhaps with the surgeon in many years.

DR. D. T. SMITH: Why do you think that nitrate of amyl acts by relieving the general tension when, by dilating the arterioles and capillaries, you allow the blood to get back into the capillaries of the heart muscle itself, reviving its strength and removing the pain probably due to the privation of blood.

DR. WM. BAILEY: It may be from widely extended influences. In conditions of this kind one of the most prominent difficulties we have to deal with is the contraction of the blood vessels. The tissues are requiring more blood, a great amount is being forced upon the arteries and arterioles by the heart, yet the tissues are unable to get it owing to the contraction of the vessels, and the most rational treatment would seem to me to be to dilate these channels, allowing the parts to obtain blood in the natural way.

There is no question but the medicines used in controlling blood tension act largely through the influence of the nervous system. In the first place, digitalis stimulates the heart to increased power; it increases inhibition of the pneumogastric, but, unfortunately, in some cases it likewise contracts the capillaries; whereas, nitroglycerine and the other nitrites, increase the heart's power without contracting the capillaries, thus relieving the pressure. Where you have heart pressure under such circumstances, nitroglycerine is much better suited to the purpose of assisting the circulation than is digitalis; but where digitalis is indicated in some forms of Bright's disease, where there is difficulty in elimination of urine from the kidneys, it is the remedy of all. Under such conditions I think the infusion of digitalis and acetate of potassium will produce relief quicker than any other means. But to say that we should give digitalis for everything where the heart is involved, I think would be very bad practice.

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SATURDAY, AUGUST 26TH, 1893.

EDITORIAL.

INEBRIETY AND ITS TREATMENT.

We invite attention to the article on *Inebriety*, by Dr. Wigginton, of Wisconsin. The magnitude and far-reaching consequences of this great evil are therein clearly apprehended, and the difficulty of its successful treatment realized.

We have recently seen elsewhere a distinction which wou'd help the diagnosis and treatment of inebriety. That distinction draws a broad line between the *drink habit* and the *drink traffic*. Inebriety, as a disease, is of the former, and not of the latter unless it be of the body politic. The treatment of inebriety, as a disease of the *individual*, is for the medical profession. The treatment of the drink traffic as a disease of the State is for statesmanship. Both are proper subjects for study and discussion, and the education of public sentiment, and should be conducted on right lines. If, as Dr. Wigginton has so clearly and properly pointed out, "prevention is vastly superior to cure," and "our first duty is in the line of prevention," and "the presence of alcoholic beverages throughout the length and breadth of our country" is one of the most potent, exciting, or direct causes of inebriety, under the law of environment, is it logical,—is it scientific to suggest that "a license sufficiently high to control its sale is the only way out of the difficulty?" Does experience anywhere suggest just how high license needs to be to control its sale sufficiently to prevent this exciting cause of inebriety? License has been tried all the way from fifty to five thousand dollars and inebriety and its existing cause have continued without abatement all along the line.

Does medical science suggest parallel remedies for other diseases? Are our health authorities now treating the threatened invasion of Cholera and Yellow Fever on this plan? Everywhere the most energetic measures within reach are employed to stamp out their first appearance. If it be wise for statesmanship, in dealing with the liquor traffic as a disease of the body politic, or as the chief exciting cause of disease among its citizens, to continue and protect by law the "presence of alcoholic beverages throughout the length and breadth of our country," why not recognize and protect the presence of the exciting causes of other diseases? If "the right living public have rights that the evil-doers must respect" and "to prevent the propagation and spread of this evil the State should have a guiding hand," then why should not the State employ its power in stamping out this disease as well as others? Why should the State license and "regulate" the exciting cause, and then establish and maintain hospitals and asylums for the treatment of the disease? True, inebriety is a disease, but the *manufacture* of, and *traffic* in intoxicating beverages that produce it, *is not a disease.* Inebriety is a form of insanity, but liquor makers and vendors are not insane. The two classes,—the disease-producer and the diseased,—are as widely separated as are the physician and his patients,—the disease healer and the diseased.

These and other queries will seem to the physician, who, accepting inebriety as a disease, knows the hopelessness of its treatment while its cause persists in vigorous existance, to demand more rational and scientific treatment.

Let the medical profession and our statesmen and all good citizens study this subject in the light of reason and common sense, and let the several sections of our country in which the various remedies have been tried, be carefully studied as to the persistence of the exciting cause under diverse treatment, and let the lessons be applied, and we may come to that condition of public health which will give relief alike from cholera, yellow fever, diphtheria, *inebriety* and all destructive diseases.

Since the Government has had such gratifying success in preventing thus far the invasion of cholera and yellow fever by the improved methods which medical science has suggested, why should not Congress at once yield to the reasonable demand which has been urged for almost a quarter of a century and appoint a Commission to inquire into the causes and cure of inebriety? No thoughtful citizen can read Dr. Wigginton's article and fail to see that this is a most important and promising field for such inquiry; and yet while one branch of Congress has repeatedly passed the measure the other has as often defeated it. Why? It surely is not because the subject is not of sufficient importance. Neither is it because the public health and morals are not involved; nor because it does not concern the material prosperity of the country. As a mere question of finance it is of far greater magnitude than the government purchase of silver bullion, or any possible change in the tarriff. Do any dissent? Then why not create the Commission of inquiry? It is not because the information is not accessible. It is, in every possible relation to the subject. Inebriety is an old disease, and yet but recently recognized as a disease, and even yet there are many who do not so regard it. All sorts of remedies have been tried by scientific, and quack statesmanship, and the most conflicting reports of results fill the air. Why not have a Commission of able, scientific gentlemen who will search out and set in order the real facts as they relate to causes and cure? The best talent of the medical profession and the best statemanship the country affords should be represented on such Commission, and the best facilities which the Government can provide should be given it; and then its labors should be consecrated by a devotion to science, philanthropy and patriotism superior to all mercenary and party considerations. Let us have a *Commission on the causes and the cure of inebriety.*

XI. International Medical Congress.

In consequence of the sanitary condition of several of the European States, which prevents their medical men leaving home, and, following the advice of many prominent scientists, both Italian and foreign, the Executive Committee of the above Congress has decided, by a large majority, to postpone the meeting till April, 1894. The exact date of the Inauguration will soon be fixed.

ABSTRACTS.

EARLY TREATMENT OF THE INSANE.

In a paper read before the American Medical Associations on this subject Dr. D. R. Brower states that he desires to call attention to this important topic before this learned and experienced body hoping to give rise to a discussion that will result in great benefit to the general practicioner by marking out the most useful line of practice for the insane, in the first stage of their disease. It is well to make the statement emphatic that the great majority of insane require as speedily as possible that peculiar care and treatment which can only be had in a well-organized hospital for the insane, but there must necessarily be in every case delay of a few days or a few weeks before the necessary arrangements, legal and otherwise, can be made that will secure for them this desirable treatment, and in this paper we propose to consider what shall be done for them during this period.

Some cases of insanity undoubtedly have their origin in auto-infection, and the violence of the manifestations, and sometimes the duration of the disease, can be modified favorably by careful attention to gastro-intestinal disinfection; so that it is well for the attending physician to carefully investigate the condition of this important canal. Colonic flushings with boracic acid, creolin, or even with sterilized water, and the internal adminstration of salol, salophin, the salicylate of bismuth, or some other gastro-intestinal disinfectant may be most judicious treatment. Some cases of insanity undoubtedly owe their origin to faulty elimination by the kidneys, bowels, and skin. It is therefore the duty of the family physician to investigate the condition of the renal secretion, not only as to the question of the presence of albumen and sugar, but as to total solids in the urine, and the relief of these conditions by appropiate treatment, alkalies and colchicum if you please, will sometimes improve the mental condition of these patients. Insufficient elimination by the bowels is a very common accompaniment of insanity in its various forms, and laxatives and enemas are often indicated and should be early administered. Cascara sagrada, the occasional use of calomel from three to five grains at bed-time, followed by a saline laxative in the morning, various laxative waters and after free evacuation of the bowels, then gentle impression on the tract by alœtic preparations will correct the intestinal insufficiency. The condition of the skin is often very deficient; warm baths, wet pack, and judicious massage will stimulate the functions of this important emunctory and be of service to the patient.

The attending physicians should give early attention to the question of feeding. In cases of mental depression, as well as in cases of mania, especially in the former, the amount of food consumed is altogether inadequate to maintain the ordinary nutrition of the body, much less to correct the deficient nutrition upon which the insanity often depends, and if the patient cannot be induced to eat by persuasion a liberal amount of food highly nutritious and easily digestible, early resort should be had to nutritive enemas, supplementing the insufficient food taken by the mouth by pre-digested foods used as enemas, and if the state of the mind of the patient is such as not to permit the use of these two methods of feeding, then early resort should be had to forcible feeding, by the nose, and this is so easily accomplished by the physician and his trained nurse, that it should not be omitted under the circumstances indicated. This forcible feeding should be done at least twice in 24 hours, and the largest quanity of the most nutritious combination of foods should be thus administered. Milk, cream, eggs, beef extracts, extract of malt, alcohol or some of its preparations, and such medicines as the patient may require, may thus be made into a common mixture and administered. I know of no more important indication connected with this matter of first care and aids to the insane than to see to it thata superabundance of easily digestible and highly concentrated nourishment is supplied.

The next important consideration is sleep. Careful attention should be given to securing in a proper manner and in proper quanity this valuable aid to treatment. In proper manner, by selecting such agents as do not disturb the general nutrition. In proper quanity, for it is bad practice to keep these patients constantly under the influence of any narcotic; the aim should be to secure only a reasonable amount of sleep in the twenty-four hours, as, for example, eight to nine hours. These are difficult considerations to secure and enforce, but they are of great importance. In its consideration it may be well to divide the cases clincally into those that are characterized in their beginning by depression and those that are characterized by exaltation. For the depressed cases certainly remedies of a depressive character are not indicated; therefore, I should object to the use of the bromides and chloral in the treatment of the insomnia in this class of insane patients. I prefer in these cases hyoscine hydrobromate a drug very easily administered, being tasteless; the dose can be easily administered in any ordinary article of diet without the patient being aware of it. Next to hyoscine hydrobromate I should place somnal as an efficient and not depressive sleep-producing agent, and I have found that the formula proposed by Dr. Spitzka of New York is a valuable one in the administration of this drug. He combines the somnal with glycerin and elixir of calisaya about as follows: Somnal, drachm iii; glycerin, drachm viii; elixir calisaya, enough to make four ounces. Dose, tablespoonful at bedtime. This may be repeated in from one to two hours.

Chloralamid and sulfonal are also excellent hypnotics. Opium is often a remedy of service in the early stages of melancholia. A good preparation of deodorized tincture of opium or codeine in full doses will not only often promote sleep, but will relieve the patient of the intensity of mental anguish during the twenty-four hours if given in repeated doses. If these several remedies fail to produce sleep in melancholia, it may be neccessary to adminster chloral hydrate. If so, the chlorate hydrate should be guarded in its depressing influences upon the circulation by the administration with it of either hyoscine hydrobromate, the tincture hyoscyamus, or the tincture cannabis indica.

In producing sleep in ordinary conditions of the exalted type of cases, a combination of the bromides with chloral hydrate will usually give the best results. From 15 to 10 grains of the bromides, potassium or sodium, with a like quantity of chloral hydrate, repeated, if necessary, every hour, will in from one to three doses produce a sound and refreshing sleep, especially if the soothing effects of these remedies have been preceeded by a hot bath with a cold compress to the head. In some of these cases of mania a combination of sulfonal with potassium bromide will sometimes produce even better sleep with less depression the ensuing day than a combination of bromide with chloral. Chloralamid and potassium bromide, 15 grains each, is sometimes a good combination to produce sleep in cases of mania. This produces even less mental disturbance the following day than either of the combinations already mentioned. Where there is in mania feebleness of the capillary circulation, it is well to add to any of these combinations that may be selected full doses of the tincture of the cannabis indica, sleep then following with less disturbance of the general nutrition.

In some forms of insanity it may be necessary for the physician to fulfill some special indications of treatment, as in puerperal insanity. It is here the duty of the attending physician to carefully consider the condition of the uterus and its annexes. These important organs may require special treatment, the condition of the lochia requiring disinfectant treatment, not only of the vagina, but of the uterus itself. The condition of the breasts should also be looked into. In the forms of insanity that develop out of puberty, various sexual derangements are especially to be considered. Masturbation both in young men and young women is probably not a cause of the insanity, but a consequence of it, and yet every possible method should be resorted to to prevent it. The laity are especially concerned about the suppression of the menses, the popular opinion being that suppression of the menses has been the cause of the insanity. While suppression of menses may, by stopping this wonderful purifying process in women, causing the retention in the body of excrementitious material, thereby intensifying the insanity, and the restoration of the menstrual epoch, if it is possible, might be of service to the patient, yet, as a rule, a the suppression of the menses is not causitive but consequential, and they will continue suppressed until the functions of the central nervous system have been restored; and the effort that is often made by the attending physician, urged by friends of the patient, to administer remedies that are supposed to have effect in retoring menstrual function is of serious injury to the patient. Very many of the laity think that travel is of benefit, and they urge this treatment but I am convinced that it is exceptional that any benefit arises therefrom. When the patient is improving, however, when restoration is under way, then judicious traveling is often a wonderful aid towards the rapid consummation of recovery. — *Medical Standard.*

NATIONAL HEALTH SERVICE.

Gratifying to every sanitarian as must be the success of Surgeon-General Wyman in securing the co-operation of the State Health Officers, under the new quarantine law, it is none the less evident that the census of medical opinion throughout the country is that a more comprehensive law is necessary.

The reports of the committees of the American Medical Association and of the New York Academy of Medicine urge national legislation to the same end, but by widely different methods. That of the Association is persistent, though twice refused consideration by the Senate Committee of Epidemic Diseases and generally disapproved by practical sanitarians.

The proposed bill by the Academy is surprising, considering the committee, some of the members are well recognized sanatarians known to be familiar with state and national sanitary efforts. It comprehends the same discordant and ultimately destructive elements of the whilom National Board, and almost ignores the State Boards of Health—leaves their recognition to the President of the Commission—and seems by elaborateness to provide against their necessity.

We believe that a much better proposition would be:

That there shall be established within the Treasury Department a National Board of Health, to consist of seven members, all of whom shall be sanitary scientists, appointed by the President, by and with the advice of the Senate, shosen one each from the Judicial Districts of the Supreme Court, who shall devote the whole of their time to the duties of their office, and who shall receive salaries of five thousand dollars per annum. There shall be an Advisory Council of the Board, consisting of the Surgeon-General of the Army, Surgeon-General of the Navy, and the Supervising Surgeon-General of the Marine Hospital Service, and the Executive Officers of the State Boards of Health, who shall be required to meet with the National Board at least once a year, and as much oftener as the President may direct for council and advice; but the members of the Advisory Council, being salaried officers, shall receive no compensation other than their travelling expenses.

That the members of the Board shall meet at such time and place as may be designated by the Secretary of the Treasury, and organize by the election from their own number of a President and Secretary; and the Board shall proceed to appoint and equip bureaus or special departments and make all needful rules and regulations for their control, and for the guidance and discipline of all their employes; and shall establish all rules and regulations for the government of national sanitation in its interstate and international relations, in the enforcement and provisions of this Act.

All questions of law shall be referred to the Department of Justice.—*Sanitarian.*

Stubborn Neuralgia.

℞

Arsenici iodid	gr. j.
Ext. belladon.,	
Morph. valerian	āā gr. viij.
Pulv. ext. gentian	gr. v.
Ext. rad. aconit	mv.

M.—et ft. pil. no. xl.

Sig.—One, two or three every twenty-four hours.

An Alkaline Linctus.

℞

Tincturae Scillae	m v.
Ammonii Carbonatis	gr. 1·6.
Essentiae Anisi	m i.
Boracis	gr. ¼.
Mucilaginis Acaciae	m xxx.
Aquae ad	ʒj.

Misce et fiat linctus.

A teaspoonful to be sucked from a spoon when the cough is troublesome.

SALOL AS AN INTESTINAL ANTISEPTIC.

Dr. E. Mansel Sympson states in *The Practitioner* for August 1893, that the action of salol in the human body is now well known and is briefly as follows. After having been swallowed and passed through the stomach unchanged, it is split up in the duodenum by the pancreatic juice into its constituents, salicylic acid and carbolic acid. Their action will be alluded to more in detail later on, but it may here be said that they are thrown out of the body partly by the kidneys (the urine not infrequently being blackened by the carbolic acid) and partly by the intestinal tract in the fæces. And from experiments on dogs whose pancreases have been extirpated, there seems to be reason to think that salol can be absorbed from the intestine without the intervention of the pancreatic juice. As to its action on digestion there are different opinions, some authorities say that it unsettles the digestive processes, and that it actually sets up gastric trouble. These statements refer to its action in typhoid fever, which will be mentioned presently; other observers have however noted directly the contrary results. I have personally taken salol in five-grain doses three or four times a day, both before and after meals, when I have been perfectly well, without experiencing the slightest interference with digestion or appetite. The following experiments will show, however, that salol does appreciably affect the different digestive ferments so far as regards their rate of action.

Experiment 1.—Ten grains of arrowroot were boiled in two ounces of distilled water, cooled down to 100° F., and ten minims of Bleasdale's pancreatic essence added. The solution became perfectly clear. When one grain of salol was added before boiling, the starch required twice the amount of pancreatic essence, and an hour's more time (being kept at the same temperature), before the conversion was complete. If the salol was merely added with the essence, it made no difference. The same results followed, only less marked, from the use of half a grain of salol.

Experiment II.—Five grains of boiled and finely chopped up white of egg were pounded up with the following mixture: Benger's liquor pepticus twenty minims, dilute hydrochloric acid ten minims, and two ounces of distilled water. For four hours this mixture was kept at a temperature of 100° F. The albumen had entirely disappeared, and the mixture gave evidence of containing peptones. The addition of half a grain of salol checked the process considerably, at the end of the same time there were several fragments of egg undissolved, and two or more hours were required for complete dissolution. Both these sets of experiments were frequently repeated and the results were distinct and constant. [1]

Before finishing this brief account of salol, it may be said that it has been accused of producing herpes, and of increasing the delirium which frequently occurs in the course of typhoid fever. I have not noticed this latter myself either in that complaint or when I have used salol in cystitis.

In normal digestion the semi-digested acid chyme is poured out from the pylorus into the small intestine, to be exposed to the influence of the bile and pancreatic juice. These complete the digestion of the various food-stuffs, and some of the products of this digestion are due to the micro-organisms which are present in the intestine. Their work seems to be modified or kept in check by the presence of bile, for, as Foster remarks, "Bile possesses some antiseptic qualities. Out of the body its presence hinders various putrefactive processes; and when it is prevented from flowing into the alimentary canal, the contents of the intestine undergo changes different from those which take place under normal conditions, and leading to the appearnce of various poducts, especially of ill-smelling gases." [2]

The stomach undoubtedly is responsible for some cases of dypepsia, where the chyme is passed on to the intestines in an imperfectly prepared manner, which produces duodenal disorder. But in the following class of cases we have, I think, evidence that occasionally the secretion poured into the intestine are at fault. The patient is probably of a "bilious" temperament, he may have a clean tongue with great loss of appetite and consequent loss of flesh; no pain during a meal, but coming on about two and a half to three hours after. Very likely he is constipated and when his bowels are relaxed the motion is greyish white. As a rule, he will not suffer from nausea, only a little retching sometimes, and instead of the gas being acid, as it so often is, it may be quite alkaline and 'soapy,' as a patient once told me. The seat of pain is the lower part of the abdomen, and is relieved by passing wind. There will perphaps be a slight yellowness, hardly amounting to actual jaundice. These cases belong, I believe, to the same class as those described by Dr. Allchin in his lectures on duodenal indigestion. I also believe that the symptoms are due to excessive and faulty fermentation in the small intestine owing to alteration in character and amount of the ordinary digestive fluids, more particularly of the bile. I have given dilute nitrohydrochloric acid to these patients, sometimes combined with liquor pepticus, to help the stomach to do its work properly; but it has made little or no difference in their condition. And opium in any form by the mouth has not given that speedy relief which it does in gastric affections. So, latterly, I have been in the habit of beginning with four or five grains of calomel, and following it in an hour or two's time with ten-grain doses of salol every four hours. This, to use the language of a somewhat enthusiastic patient, "acts like a charm" when taken about one and a half hours after meals. The pain ceases, the swelling of the abdomen does not appear, the appetite improves, and more important still, the wasting (due, I presume, to the non-digestion of a large part of the food) departs.

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[1] Similiar experiments made with salicylate of sodium showed that this drug had no action in pancreatic digestion, but about the same as salol in peptic digestion.

[2] Foster's *Physiology*, 1889, p. 425. Also see a very interesting paper by Professor C. S. Sherrington, "The Escape of Bacteria with the Secretions," *Journal of Pathology and Bacteriology*, February 1893.

Another complaint wherein I have found salol exceedingly useful is a form of infective diarrhœa. Some months back I saw a family in a village near Lincoln who all had diarrhœa, passing dark-brown watery stools five, six, seven, or eight times in the twenty-four hours, attended with severe abdominal pain. In a few days several of the inhabitants of the village were seized with the same complaint, and every one had been into the first-mentioned house. Several more got it from the second source of infection. I regret that I was unable to discover any probable origin of the disease. I tried opium alone in some of the cases, but its action was far inferior to that of salol, whether combined with opiates or not.

In cases of ordinary diarrhœa, too, there are few remedies which more speedily check the flow and the pain than two-grain doses of salol. Some years ago, in the *Lancet*, I advocated giving glycerine of borax in the diarrhœa of infants, believing that undue fermentation in the intestines was the *fons et origo mali.* It does answer well, as I have over and over again seen; but I prefer in the severer cases to use salol in doses proportionate to age, as being a little more certain, more antiseptic, and almost as agreeable to take.

Lastly, I have been using salol exclusively in typhoid fever, not so much on the idea of combating the specific poison, but of cleaning and keeping clean the intestinal tract, and so subduing the irritation of the glands of Peyer's patches and other ulcers there, and that caused by the secretion from these ulcers in the intestine. Salol also prevents the excessive formation of wind, which is sometimes such a vexatious trouble to the patient. Salol brings the temperature down generally one or two degrees, causing abundant perspiration (this can be readily combated by giving oxide of zinc, tincture of belladonna, and some quinine in a mixture), reduces the number of stools from twelve or fourteen in the twenty-four hours to three or four, and when they are offensive, deprives them of any odor whatever. No bad effects were noticed with regard to its action in producing delirium. Its use was continued in typhoid fever for about a week after the disappearance of diarrhœa. It was always given in ten-grain doses suspended by means of compound tragacanth powder, at first (in typhoid fever and other complaints) every few hours, then every six, and for the last week three times a day. It was always given after food.

A Soothing Ointment for Eczema.

℞

Bismuthi Oxidi	ʒj.
Bismuthi Subnitratis	ʒj.
Acidi Oleici	ʒj.
Ceræ Albæ	ʒij.
Adipis Lanæ	ʒx.

Misce et fiat unguentum.
Apply to the affected parts.

WHAT IS THE VALUE OF THE SALICYLATES IN RHEUMATISM?

Many members of the profession will at once answer the question which heads this editorial in favor of salicylates. Yet there are others, who are able to quote large statistics and wide clinical experience, who will state that they believe that the general confidence in the value of the salicylates in acute articular rheumatism is not justified by the results which are obtained from its administration.

Probably the correct solution of this mooted point lies in the subdivision of the action of salicylates on the various parts of the body. Under such circumstances there is no doubt that the universal experience has been that salicylic acid or its salts produces a subsidence of the pain and swelling in the joints which are affected by acute articular rheumatism, and that this result may be accomplished after but three or four doses, or certainly by the third or fourth day. On the other hand, the collective investigation committee of the British Medical Association found that the average duration of pain was a little over ten days, while a collection made from the cases treated in the London hospital barely exceeded five days. Be this as it may, the results of both these investigations, which aggregated something like twelve hundred cases, showed that the drugs caused an amelioration of the joint-symptoms. Similarly, salicylic acid produces reduction of the fever, and in many instances the febrile process, under its influence, only persists for two or three days. On the other hand, it must be remembered that every now and then we meet with cases in which the joint-symptoms and the fever resists all doses of the salicylates which we may give within the limits of safety.

So far, then, we may consider that on general principles two of the important symptoms of acute articular rheumatism are relieved.

On the other hand, there are certain complications, which are so frequent and occur so early that they may be considered as symptoms or a distinct part of the disease, in which salicylic acid probably effects but little, namely, the appearance of cardiac manifestations of the action of the rheumatic poison. Of course, it is true that salicylic acid, by shortening an attack of rheumatism, in that way indirectly protects the heart; but, at the same time, there is no evidence that it protects this organ from the actual presence of the disease process. In other words, it may prevent cardiac disease indirectly, but its administration in no way preserves the cardiac apparatus intact while the febrile symptoms last. This has been pointed out in a number of the standard works on medicine, and should be universally recognized by the profession, even though all its members may not be willing to admit that the statement is entirely true. Thus, in Stewart's article in the "System of Therapeutics," he points out that Hood, of London, in the treatment of twenty-two hundred cases of acute articular rheumatism appearing in both sexes under thirty-six years of age, noticed that there were a very large number of instances in which cardiac disease was produced. Thus, of eight hundred and twenty-eight cases treated without salicylates, five hundred had cardiac disease, whereas in three hundred and twenty-eight cases treated with salicylates, one hundred and ninety had cardiac disease; or again, of three hundred and sixty cases treated with salicylates, two hundred and forty-one had complications, and in another series three hundred and sixteen suffered from cardiac disease out of a total of five hundred and fifteen. In other words, in all cases treated by salicylates the aggregate of cardiac complications was somewhat over sixty per cent., while those who were treated by other measures had cardiac complications in a little less than sixty per cent. It is, therefore, evident that the salicylic compounds are no more affective in avoiding these unfortunate manifestations of the rheumatic poison than are the various other modes of treatment. This point is emphasized, too, by the fact that the percentage of cardiac disease in cases treated by the salicylates is about the general percentage of cases, namely, between fifty and sixty per cent. It is also true that relapses seem to occur more frequently under the salicylates than under the older methods of treatment; perhaps because, when the older methods are used, the disease runs its course, or, as it were, exhausts itself, whereas the salicylates may alter its course before the system is thoroughly rid of the rheumatic poison.

To quote Stewart again: "Garrett has shown that the salicylates seem to have more effect upon the hyperemic group of symptoms, as, for example, those manifested about a joint, than upon the fibrous symptoms, as, for example, those seen in endocarditis."

There are other points which might be discussed in regard to the value of salicylic acid in rheumatism, but these are, after all, the most important. In view of the recent studies of Haig and those of other investigators who have not been so thorough in their methods of research, we cannot doubt that this class of compounds, uniting with the uric acid, produce salicyluric acid, which is readily eliminated, and so directly or indirectly result in the amelioration of the rheumatic symptoms.

It is hardly in place to consider the disadvantages which salicylates possess, so far as their untoward symptoms are concerned. That they are capable of producing disagreeable symptoms everyone knows, but they probably do not cause difficulties to arise any more frequently than other drugs possessing medicinal power of great value. There are instances of very severe symptoms, but after all, these have been few and far between. Perhaps the most noteworthy of these are the ones reported within the last few years in the *London Practitioner,* where the use of what might be called a very moderate dose of the salicylates produced petechial eruption and retinal hemorrhages, which latter resulted not only in temporary but permanent blindness.

There are but two points in regard to the use of salicylates in rheumatism which, we think, should be particularly emphasized, and these are, (1) that the physician, after once deciding to administer these remedies, should give them in large doses or not at all, that is, to use no less than forty to eighty grains a day; (2) that if, after administering the drugs in this way, no amelioration of the symptoms of any note has occurred at the end of four or five days, that it is useless to continue this line of treatment, as little good will be exercised over the rheumatic process, and much harm will be done by saturating the patient with such irritants to the kidneys and stomach as are the class of the salicylates.—*Therapeutic Gazette.*

DIFFERENTIAL DIAGNOSIS AND TREATMENT OF CHRONIC EAR DISEASE.

Mr. Marmaduke Shield, writing on cholesteatoma of the mastoid cells, remarks that the pathology of these tumors, or rather accumulations, seems rather confused. They are considered as neoplasms by some; by others as originating in desquamating epithelium; and by a few as concentric masses of inflammatory *dêbris,* containing cholesterine and amorphous material with fat globules and fragmentary cells. The unyielding nature of the confining walls largely determines the shape and consistence of these masses. It is especially necessary in the ear not to confound these growths with dermoid cysts. A dermoid cyst has a distinct capsule and usually contains hairs; a cholesteatomatous formation is merely bounded by condensed laminæ and contains caseating *dèbris.* The true cholesteatoma of the mastoid is not a neoplasm in the strict sense of the word, but is due to the accumulation of many generations of squamous epithelial cells, which are successively shed. The epithelium grows into the mastoid antrum or cells from the auditory canal or tympanum through an opening previously caused by carious and necrotic processes. The symptoms occasioned by such tumors are largely those of chronic mastoid disease, and exploration will detect their true nature. After free excision, efficient drainage of the resulting cavity is best carried out by removing the overlying bone far more thoroughly than is generally done. Soaking with alkalies or pancreatic liquor, followed by the use of the intra-tympanic syringe, is a useful treatment for accumulations of this kind. These points are well illustrated by the following case: An anæmic young woman, whose early history was obscure, was admitted into Charing Cross Hospital for right facial paralysis, associated with suppurative middle ear disease, and apparently dependent upon it. The patient was extremely ill, drowsy and stupid. A scanty but fœtid discharge flowed from the right ear. The patient had suffered from ear disease since childhood, and had had a previous attack of facial paralysis which had passed off. She was quite deaf on the affected side, even to loud conversation, but the tuning fork could be long heard on the mastoid and the watch on contact. Her principal trouble was persistent headache. The right facial muscles failed to respond to faradism. On examination it was found that there was partial destruction of the membrane with granulations. A small discharging sinus existed behind the ear. The mastoid fistula was explored under ether. It just admitted a fine probe. Mr. Shield enlarged the opening, and a small spoon was passed into a cavity of considerable size, full of firm caseating offensive material, composed of *dèbris* and large flat cells with a quantity of cholesterine. Pulsation could readily be detected against the spoon, as though the cavity were bounded by the dura mater. Iodoform emulsion was injected, and freely escaped through the meatus. A full sized tube was introduced and the parts daily syringed with a solution of peroxide of hydrogen, with the most marked relief to the "head symptoms." Subsequently a more extensive operation was deemed advisable to obviate a persistent sinus. Mr. Shield exposed the mastoid region, and, taking the sinus as center, with mallet and gouge removed the outer shell of the large cavity. Working layer by layer, he opened a considerable cavity, which seemed to include the whole mastoid; and concentrically arranged layers of tough cheesy material were detached by scoops. When this had all been removed there remained a smooth-walled cavity the size of a walnut. There was a total absence of signs of caries. When the patient was eventually sent to a convalescent home the hearing for conversation was good, and her general health and intelligence markedly better.—*The London Lancet.*

Diseases of the Spleen and their Importance.*

Dando, of Milano, 1893, had made a collection of statistics of extirpation of the spleen, numbering 102, with forty-six recoveries and fifty-six deaths. The number of deaths chiefly followed in cases of leukæmic spleen. In a collection of twenty-five cases death followed promptly. The results of extirpation in simple hypertrophy are also unfavorable; eighteen operations with eleven deaths. In the cases of splenic malaria, eleven deaths in twenty-three operations. The results of operation for floating spleen are usually favorable; seventeen operations with two deaths. The remaining nineteen operations were cases of abscess of the spleen, plain cysts, echinococcus, amyloid, sarcoma, lympho-sarcoma, obstruction of the spleen, making in all seven deaths.

In connection with this paper the author has removed the doubts raised against the extirpation of the spleen by Zoccariello and Fioraranti in the year 1549.

Prickly Heat.

Dr. Pollitzer finds that in prickly heat the horny layer of the epidermis is swollen by imbibition of water, the rete Malpighii slighly œdematous and containing cystically dilated sweat ducts, the blood-vessels of the papillary layer gorged. His view of the etiology of prickly heat is that it develops on a skin soaked in perspiration and insufficiently supplied with fat. He recommends patients suffering from it insummer in hot climates to anoint the regions usually affected with a fat after the morning bath, the fat he advises being lanoline with the addition of a little almond oil. — *Jour. of Cut. and Gen.-Urin. Dis.*

A Nervine Tonic in Pill Form.

℞

Ferri Phosphatis	gr. i.
Strychninæ	gr. 1-32.
Quininæ Sulphatis	gr. i.
Acidi Phosphorici Concentrati	m iss.
Radicis Glycyrrhizæ Pulv. ad	gr. v.

Misce et fiat pilula.
One pill to be taken three times a day.

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*A lecture read before the Society of Wissenschaftlitche Heil in Konigsburg i. Pr. Translated by M. B Werner, M. D.

CURRENT LITERATURE REVIEWED.

THE ANNALS OF OPHTHALMOLOGY AND OTOLOGY

for April, commences with a paper by Charles Stedman Bull, M. D., on

Gonorrhœal Irido-choroiditis

With a report of two cases. The same line of treatment was pursued in both cases. "Ten grains of sodium salicylate were given every hour for nearly three days when signs of gastric irritation compelled the discontinuance of the drug. Hot fomentations were applied continuously to the eyes and a mixture of atropine and cocaine was instilled every two hours and three leeches applied to the temple. After an interval of twenty-four hours, potassium iodide in twenty grain doses was administered three times a day, combined with twenty grains of the bisulphate of quinine." Under this treatment the pain in the eye was rapidly relieved but as the potash soon disturbed the stomach it was discontinued. The local treatment was continued and a cure effected by giving salicylate of cinchonidia five grains every hour, which was well borne by the patient. Dr. Bull remarks that the disappearance of the iritis under appropriate treatment without leaving posterior synechiæ proves the absence of the plastic character. Its prompt disappearance distinguishes it also from the usual forms of serous iritis.

Dr. Charles W. Kollock of Charleston, S. C., contributes a very interesting paper on

The Eye of the Negro

He states that the eye of the negro is not so good as before the war. During the days of slavery the master engaged the best medical talent for his protection and every case was taken to preserve him in the best of health. But with the war came many troubles, many negroes were sent to work upon the fortifications which were constructed along the coast, troops from both armies camped in their midst and syphilis having thus a comparatively new field spread as fire on the prairie, carrying every thing before it, so that now it is scarcely an exaggeration to say that when you see a negro, you see a case of syphilis. "A careful inquiry among the older physicians proves that before the war these people had little or no eye trouble beyond cataract, that ulceration of the cornea, which now numbers its victims by the thousand, was almost unknown, and it is certainly very rare that nebulous cornea, iritic adhesions and eyes lost from ophthalmia neonatorum are seen among the older and ex-slaves, while among the younger, the post-bellum negro, such cases are not only of daily occurrence but steadily increasing." This is partially the "diseased condition of the people, who being now thoroughly syphilized, possess all the dyscrasias that may follow such a condition and present a most fertile soil for all ulcerating and wasting diseases. Not entirely to syphilis can all this be laid, but to their manner of living, poorly housed and clothed, and ill nourished. Parents are utterly indifferent to the condition of their children, allowing them to go months without treatment, or perhaps using the filthiest of domestic remedies. Blindness, or greatly inpaired vision, is seen on all sides from this cause, and the outlook is truly discouraging. Trachoma is comparatively rare among them, but so it is among the whites of Charleston and throughout South Carolina." Iritis is of very common occurence. Cataract is quite as frequently seen in the negro as the white. Retinitis, optic neuritis, and choroiditis are not infrequently seen in the eye of the negro, but retinitis pigmentosa has not been observed in the pure blood black. Xerosis conjunctivæ is in Charleston and vicinity, a condition peculiar to the negro, and especially the children, and as yet not a case has been observed among the whites. In many cases tonic treatment and good food will bring about a cure, while in others nothing seems to improve.

Referring to the refraction of the eye of the negro, the writer states that "he has never seen but three cases of myopia in the black negro, and though they were black in color, still the features indicated mixed blood, therefore in the pure-blooded negro he has never seen a case of true myopia." But a comparatively small number of pure bloods have been examined for refractive errors when their eyes were under the influence of a mydriatic. The vision has however been almost invariably tested, and in the great majority of cases was found to be normal unless some haziness of the media existed; and the ophthalmoscopic examination confirmed the fact that but few varied from the normal or emmetropic eye. Among the mulattoes a very different state of affairs exists.

The eyes of sixty negroes, blacks and mulattoes, have been recently examined, whilst under the influence of a mydriatic, for refractive errors; of the sixty examined eleven were black and forty-nine were mulattoes. Of the eleven blacks six were males. Four of the black men were emmetropic. Three of the black women were emmetropic, one was hypermetropic, and one had myopic astigmatism, Of the forty-nine mulattoes, seven were men and forty-two women; of the seven men four were hyperopic, three myopic. Of the forty-two mulatto women, one was emmetropic, twenty-one were hyperopic, seven myopic; eleven had hyperopic astigmatism and myopic astigmatism. The author concludes by saying "Undoubtly the eye of the negro is failing from three causes, viz.: Civilization, syphilis and education."

This paper is followed by one on

Reflex Ocular Disturbance from Irritation of the Genital Organs.

by Edward B. Patterson, A. M., M. D. of Michigamme, Michigan

Dr. John Dunn of Richmond, Va., reports one case and Dr. Howard McIlvain Morton, of Minneapolis, Minn., reports two cases of "Keratitis Dendritica." In Dr. Dunn's case more decided improvement was effected by the galvanic current applied to the closed lids than by any other treatment. In the cases treated by Dr. Morton aristol was dusted on the ulcers, and a solution of atropine and eserine was instillated. A satisfactory cure resulted from these applications.

THE ANNALS OF GYNECOLOGY AND PÆDRIATRY.

for August. Dr. M. Rosenwassar contributes a paper on

What are the Indications for Abdominal Section in Intra-pelvic Hemorrhage?

The author comes to the following conclusions:

1. Intra-pelvic hemorrhage may be free into the peritoneal cavity, or primarily or secondarily circumscribed by true or false membranes.
2. Though nearly always due to ruptured ectopic pregnancy, the same surgical principles underlying the treatment of other similar hemorrhages are applicable in intra-pelvic hemorrhage.
3. Such treatment must, however, vary accordingly to the conditions, dependent primarily on the hemorrhage, and secondarily on the original cause of the hemorrhage; hence,
4. To prevent free intra-pelvic hemorrhage, abdominal section is indicated in all cases of presumably recognized, unruptured tubal pregnancy, either as a prophylactic, or for the purpose of removing pathological conditions not otherwise curable.
5. In all cases of free intra-pelvic hemorrhage, from whatever cause, early or immediate section is the only safe means of averting a fatal termination.
6. In circumscribed intra-pelvic hemorrhage, section is indicated for removal of increasing blood clot and debris, whether it be due to recurrent bleeding or continued growth of fœtus.
7. In circumscribed intra-pelvic hemorrhage section is necessary whenever the symptoms indicate decomposition of the blood clot.
8. Lastly, section is also indicated whenever the pressure of the circumscribed blood mass produces obstruction of the bowel.

Appended to the paper is the table of sixteen operations performed for intra-pelvic hemorrhage.

Dr. Wallace A. Briggs contributes a paper on

The Obstetric Forceps.

The indictment he brings against the ordinary obstetric forceps is, that its use demands an extravagant expenditure of force and attention with correspondingly diminished reserve and control. He proposes a modification of the present form in which the handles are shaped like that of a shovel and are detachable from the shaft, fitting two pairs of blades, long and short, and of an axis traction attachment in the form of a straight bar projecting at a right angle downwards from the main handles. The handles are made detachable for the purpose of facilitating the crossing of the blades and perhaps at times the introduction of the blades. The author states that these forceps have stood the test of practice. The points of superiority claimed for this instrument are: firm and comfortable grasp; economy in the expenditure of force and exactitude in its application; reserve force and consequent control.

Uretero-vaginal Fistula following Vaginal Hysterectomy for Cancer of the Uterus.

is discussed by Dr. L. H. Dunning. After reviewing the literature of the subject, the author presents the following conclusions:

1. Injury of the ureter during vaginal hysterectomy is liable to occur in the practice of skillful operators.
2. It is more likely to occur when there is broad ligament infiltration, or when there has been parametric inflammation, with adhesions.
3. Whether the use of forceps and clamps more frequently results in such injury and fistula than when ligatures are employed has not been determined, but such is probable.
4. In the five new cases the injury did not seem to have an unfavorable influence upon the immediate recovery of the patient. More observations are needed upon this point.
5. In cases of resulting ureteral fistula, disease of the corresponding kidney is prone sooner or later to appear, whether the fistulous opening be into the vagina or upon the surface of the body.
6. Operations for the closure of uretero-vaginal fistula, so that the urine will have an unobstructed and uninterrupted flow in the bladder, should in proper case be employed.
7. The operations of Parvin, Simon, Bandl, Landau and Gerde have this end in view, and should be employed in suitable cases if the kidney is healthy.
8. Kolpokleisis, either partial or complete, leaves an artificial receptacle for the urine walled in by tissue, in which we fear the speedy return of cancer, hence is of doubtful utility.
9. Nephrectomy is a justifiable precedure in uretero-vaginal fistula when there is obstruction to a free flow of the urine into the vagina that cannot be overcome by dilatation of the fistulous opening, in case of failure of plastic operation and when the corresponding kidney is markedly diseased.

Salpingitis and Pelvic Adhesions

is the title of a paper by Dr. H. G. Wetherill, in which the following conclusions are reached by the author.

1. Tubal and ovarian inflammations are usually associated; the one rarely being present without the other.
2. This tubo-ovaritis is nearly always the extension of a specific or septic inflammation along the mucous membrane, or through the lymphatic vessels.
3. That this implies an unclean vagina or uterine canal (in the modern surgical sense),

or that hands or instruments introduced into the genital tract have carried infection to it.

4. Abrasions and lacerations of the mucous membrane greatly increase the risk of tubo-ovaritis by lymphatic extension and by the facility offered for the growth of bacteria, and the difficulty of sterilizing wounds in such a situation.

5. Surgical cleanliness of all vaginal and uterine manipulations is imperative as a prophylactic measure. Labor at term and abortions must be followed by rigid antisepsis. Lacerations should be approximated at once when possible and abrasions kept perfectly clean.

6. Adhesions about an inflamed tube and ovary are conservative in design and effect, and should not be disturbed till the disease back of them is removed.

7. When the disease is removed the adhesions tend to absorption and usually disappear in time.

8. Septic infection is a more potent factor in causing adhesions than simple aseptic traumatism, and the adhesions following slight injury to the healthy peritoneum are due to mild infection, which may have taken place at the same time.

Dr. J. S. Hammond contributes a paper on "Puerperal Eclampsia" advocating the use of veratrum viride in doses of thirity to forty drops of Norwood's tincture hyperdermically.

Dr. Alexander J. C. Skene discusses the "Pathology and Treatment of Injuries of the Pelvic Floor." A review of his paper will be found in THE MEDICAL AND SURGICAL REPORTER for August 19, 1893, page 306.

The remaining papers in the issue are: "Catheterization of the Ureters," by Dr. Howard A. Kelly; "Dilatation of the Cervix for Dysmenorrhœa," by Dr. Edmund M. Pond; and, in the Pædiatric Department, an interesting paper by Dr. William D. Wirt on the "Conservative Treatment of Joint Diseases."

PERISCOPE.

MEDICINE.

Th Forms of Diabetes.

Dr. George Harley gives the following classification of diabetes:

1. Hepatic diabetes—including the gouty variety.
2. Cerebral diabetes—including all cases of saccharine urine arising from nerve derangements.
3. Pancreatic diabetes—the most deadly form of the disease.
4. Hereditary diabetes—a form by no means uncommon, and one, too, where both brothers and sisters may labor under the disease without either their maternal or paternal parent having been effected by diabetes, though more distant members of the family may have suffered from it.
5. Food diabetes—including all forms of saccharine urine arising from the ingestion of unwholesome substances.

In the matter of treatment, besides diet and opium or codeine, Dr. Harley recommends croton chloral, strychnine, phosphoric acid for thirst, and an absolute prohibition of alcohol—*Med. Record.*

Hot Water in the Treatment of Corneal Affections.

Dr. J. A. Lippincott (*Ophthalmic Review*) recommends the repeated instillation of water at a temperature of about 150° F., applied directly drop by drop, to the affected area in obstinate corneal ulcers and in suppuration after corneal wounds. He details one case in which this method was very effectual, and refers to others in which he has been satisfied with its results. He advises that the water be heated in a test tube, or some other vessel, in order to secure a certain temperature, and then transferred by means of a dropper and applied as before described.

Gastric Ulcers and the Consequent Symptoms of Irritation.

Prof. Wilhelm Fleiner (*Munchener med. Wochenschrift*) writes concerning the results of injections of large quantities of bismuth subnitrate through the stomach-tube in case of ulcer, and the various painful or intolerant conditions of the stomach arising from ulcer or cancer. The indications are:

1. In all sensitory, motor or secretory signs of irritation of the stomach in which simple lavage is not sufficient, as in old ulcers, ulcerating carcinoma or hemorrhagic erosions.
2. As a specific remedy in gastric or duodenal ulcer.

The bismuth is to be used daily at first, then with decreasing frequency. The dose is 150 to 200 grains suspended in lukewarm water. When the stomach-tube cannot be used, the same may be drunk from a tumbler. It is contradicted where there is much decrease of HCl, except in ulcerating cancer and hemorrhagic erosions.—*Lancet Clinic, Cincinnati.*

Vaseline in Certain Affections of the Middle Ear.

Dr. Delstanche (*Le Bulletin Medical*, No. 8, 1893) speaks highly of injections of liquid vaseline in adhesive affections of the ear. He injects it through the Eustachian tube into the tympanic cavity. It is perfectly innocuous, and from an experience extending over several years he finds it of value:

1. To rupture extensive adhesions of the tympanic membrane with the wall of the labryinth where insufflation of air, etc., are found insufficient. He has had several cases of partial success with forced injections of the liquid vaseline.
2. To clear out mucous accumulations from the tympanum during the course of certain chronic catarrhs. It forces the mucus into the mastoid cells, where it no longer interferes with hearing, or into the pharynx.
3. To diminish the chances of inflammatory reaction after paracentesis of the tympanum, where the matter filling the tympanum is dense or viscid, and will not evacuate itself spontaneously in a satisfactory manner. Here, from its innocu ity, it is to be preferred to any other liquid.
4. To open an obstructed Eustachian tube when mucus blocks it and prevents insufflation of air, a few drops of vaseline blown through the catheter will clear it at once. Hence this simple means is always to be tried before dilatation with sounds is attempted.
5. Finally, in acute inflammation of the middle ear, either with or without perforation, especially in purulent otitis complicating influenza, massive injections of liquid vaseline saturated with iodoform render signal service, from their sedative action upon the atrocious pains which often accompany this affection. They also appear to hasten and aid to a favorable termination.

Pilocarpine in Elephantiasis.

Dr. Poulet (*Med. Neuigkeiten*, No. 7, 1893), in a case of elephantiasis involving one leg, obtained a lasting and considerable decrease in size of the member by subcutaneous daily injections into the limb of 1 to 2 dgm. doses of pilocarpine. This treatment was continued through several months.—*Pritchard.*

Phenacetin Poisoning.

The following case, illustrating some effects of phenacetin, is of interest in view of the rapidly extending use of this drug among the general public; it is recorded by Eisenhart. A strong and healthy man, thirty-two years of age, was given for neuralgia proceeding from a carious tooth antifebrin in doses of about seven grains, with no result except the appearance of a swelling about the size of a hazel nut on the jaw. Phenacetin was then given in two doses of fifteen grains each in the morning and in the evening with two hours' interval. The effect was satisfactory: not only did the pain in the branches of the fifth nerve disappear after the second powder, but the swelling became less, only some dull pain in the tooth remaining. To remove this, the patient took on the following evening three powders—one at five o'clock, the second at 6.30, and the third about eight, shortly before supper. About nine o'clock he was seized with palpitation, increase of the action of the heart, and a certain oppression of breathing, more especially in speaking. These symptoms remained without variation for half an hour, when they suddenly increased: the oppression became more intense, palpitation rapidly got worse, deafness was manifest, and evanescent hot flushing with outbreak of perspiration, sickness and vomiting. With the sickness every trace of poisoning passed away entirely, and the patient felt quite well.—*Therap. Monat.*

Some Drawbacks of Borax in Epilepsy.

Now that borax is so much employed in the treatment of epilepsy it is well to remember that, when it has been long continued, it causes, as noted by M. Lemoine Georges of Lille, a peculiar disease of the gums like that seen after lead. Diarrhœa and skin eruptions are also mentioned by Dr. Gowers as disagreeable and not infrequent effects. It is desirable to begin with small doses, such as fifteen grains daily.—*Med. Chron.*

Crying in Children.

The cry of children, according to Dr. E. C. Hills in pneumoina and capillary bronchitis is moderate and peevish and muffled, as if the door were shut between child and hearer. The cry of croup is hoarse, brassy and metallic, with a crowd inspiration. That of cerebral disease, particularly hydrocephalus, is short, sharp, shrill and solitary. Marasmus and tubecular peritonitis are manifested by moaning and wailing. Obstinate, passionate, and along-continued crying tells of earache, thirst, hunger, orginal meanness, or the pricking of a pin. The pleuritic is louder and shriller than the pneumonic, and is evoked by moving the child or on coughing. The cry of intestinal ailments is often accompanied by wriggling and writhing before defecation. Exhaustion is manifested with a whine. Crying only, or just after coughing, indicates pain caused by the act. The return or inspiratory part of the cry grows weaker toward the fatal end of all diseases, and the absence of crying during disease is often of graver import than its presence, showing complet exhaustion and loss of power. Loud screaming sometimes tells of renal gravel.—*Ontario Med. Journal.*

The Treatment of Hemorrhoids by Electricity.

Bacon employs the following methods, which in all of his cases caused a decided decrease in the tumors, without secondary hemorrhage, sloughing or after-pains. He makes use of an instrument consisting of a long pair of forceps, similar to urethral forceps insulated with vulcanized rubber, except at a place one-half an inch in length on the face of the blades. By means of a binding screw the forceps can be connected with the positive pole of a battery. The hemorrhoid is seized with the forceps in such a manner as to have the exposed metal of the blades clasp it at its base. The negative pole is connected with a disk or needle-holder, preferably one containing four needles. After grasping the hemorrhoid with the forceps, a few drops of a 4 per cent. solution of cocaine are injected into the tumor. The needles are then pushed into the center of the tumor, and a current of from five to ten milliamperes turned on. Immediately there will be noticed an escape of hydrogen about the needles, and a decided blanching of the pile. The current should be kept on until the tumor becomes a whitish gray, usually requiring from two to five minutes of time.

There are some points necessary to observe in using eloctrolysis in this class of cases: Thoroughly empty the colon before operating. Disinfect the tumor before introducing the needle. Never use this method in acutely inflamed hemorrhoids. The needles should be boiled before using.—*Univ. Med. Mag.*

Transfusion of Nervous Tissue in Neurasthenia.

To the French Academy of Medicine M. Constantin Paul reports the results of the treatment of sixty-one cases of neurasthenia by the injection of the grey substance of the cortex of the sheep diluted with water. In fifteen cares there have been no results; in forty-six there has been more or less success. Of these fifteen cases eight had not given the treatment a long enough trial; four were hypochondriacs who are very little amenable to any treatment. There had been sucess in some cerebro-spinal cases, in one spinal case, in some cases of impotence, in some of chlorosis, in some of neurasthenia at change of life, in some in old age, and in other cases during chronic uterine disease. There had been improvement in sleep, in mental activity, and in cardiac strength. In the commonest cerebro-spinal forms the general plan of treatment had been to give twenty injections during eight or ten weeks.—*Le Progres Med.*

ARMY AND NAVY.

U. S. ARMY FROM AUGUST 13, 1893, TO AUGUST 19, 1893.

Leave of absence for one month, to commence about September 1st, 1893, is granted Captain M. W. Food, Assistant Surgeon U. S. Army.

By direction of the President the retirement from active service this date, by operation of law, of Lieutenant Colonel John H. Janeway, deputy surgeon general, under the provisions of the act of Congress approved June 30, 1882, is announced.

Leave of absence for one month, to take effect when relieved by another medical officer, is granted First Lieutenant Harlan E. Mc Vay, assistant surgeon, San Carlos, A. T., with permission to apply for an extension of fifteen (15) days.

Major Henry R. Tilton, surgeon U. S. Army, is granted two (2) months leave of absence, when relieved from duty at Fort Wayne, Michigan.

U. S. MARINE HOSPITAL SERVICE FOR THE EIGHT WEEKS ENDED AUGUST 5, 1893.

Fessenden, C. S. D., Surgeon, to proceed to Mobile. Ala., for duty June 16, 1893. To proceed to New Orleans, La., as Inspector, Aug. 1, 1893.

Murray, R. D., Surgeon, granted leave of absence for seven days, June 21, 1893.

Vansant, John, Surgeon, to proceed to Wilmington, N. C., for duty June 16, 1893.

Austin, H. W., Surgeon, to inspect Delaware Breakwater Quarantine Station, July 22, 1893.

Gassaway. J. M., Surgeon, to proceed to Detroit, Mich., and Chicago, Ill., as Inspector, July 12th, 1893.

Irwin, Fairfax, Surgeon, detailed for duty in Office of the U. S. Consul, London, England, July 2nd, 1893.

Carter, H. R., Surgeon, to proceed to Brunswick, Georgia, for temporary duty. June 28th, 1893.

Peckham, C. T., Passed Asst. Surgeon, granted leave of absence for six days, June 22, 1893.

Brooks, S. D., Passed Asst. Surgeon, granted leave of absence for three days, June 22, 1893.

Carrington P. M., Passed Asst. Surgeon, detailed for duty in office of U. S. Consul, Bremen, Germany, June 15th, 1893.

Kinyoun, J. J., Passed Asst. Surgeon, to rejoin Station, Washington, D. C., July 10th, 1893. To inspect Camp Low, New Jersey, July 29th, 1893.

Goodwin, H. T., Passed Assistant Surgeon, granted leave of absence for three days, June 12th, 1893. To proceed to Louisville, Ky., for duty, July 12th, 1893.

Vaughan, G. T., Passed Asst. Surgeon, to proceed to Chicago, Ill., for temporay duty, July 10th, 1893.

Geddings, H. D., Passed Asst. Surgeon, to proceed to Delaware Breakwater Quarantine for duty, June 30th, 1893.

Perry, J. C., Passed Asst. Surgeon, to proceed to Portland, Me., for temporary duty, July 8. 1893.

Stimpson, W. G., Asst. Surgeon, detailed for duty in Office U. S. Consul, Glasgow, Scotland, July 7th, 1893.

Gardner, C. H., Asst. Surgeon, granted leave of absence for fourteen days, July 19th, 1893.

Strayer, Edgar, Asst. Surgeon, to proceed to Vineyard Haven, Mass., for temporary duty, July 8, 1893.

Oakley, J. H., Asst. Surgeon, to proceed to Wilmington, N. C., for temporary duty, June 24th, 1893.

Norman, Seaton, Asst. Surgeon, granted leave of absence for three days, July 24, 1893.

Branham, J. W., Asst. Surgeon, to proceed to Brunswick, Ga., for temporary duty, July 25, 1893.

Sprague, E. K., Asst. Surgeon, granted leave of absence for fifteen days, July 22nd, 1893.

Prochazka, Emil, Asst. Surgeon, relieved from duty at Ellis Island, N. Y., and ordered to report to Medical Officer in command, New York, N. Y., July 29th, 1893.

THE

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ORIGINAL ARTICLES.

THE TREATMENT OF DIPHTHERIA.*

R. A. PATTERSON, M. D., AURELIAN SPRINGS, N.C.

The constant discovery of new remedies, the new applications of old ones and the appalling fatality of some visitations of diphtheria, even at this day of advanced medical knowledge, seems to justify the effort to cast upon it every ray of light possible, even at the risk of much repetition.

If it be claimed that the pathology, diagnosis and etiology of the disease are understood, the great diversity of systems of therapeutics offered by their various advocates, show that the best mode of treatment is far from being established, and should this priceless boon ever be granted, it must in turn reflect great additional light on the causes and pathology of diphtheria and thereby act as a prophylactic. Striving to reach this most desirable point, viz.: to determine the most successful mode of treating diphtheria, the writer would add another to the list of remedies, or rather a plan of treatment which has proved most efficacious.

Diphtheria has been described under various names from a remote period, the names being taken mainly from its visible effects. A fibrous deposit on certain mucous membranes characterizes the disease. The membrane may be merely attached to the mucous surface, or may infiltrate it and the tissues beneath. Some writers, however, claim that this difference is the proper distinction between diphtheritic and croupous deposits. They contend that when the deposit is superficial and does not infiltrate it is croupous, and when it infiltrates it is diphtheritic. The tonsils and neighboring parts are the regions mainly affected in the early stages, and as it is estimated that three-fourths of the fatal cases result from the invasion of the air passages, it should obviously be the object of the practitioner to arrest it ere it extends further. Experience proves that this arrest can be made, if treatment be begun early on the plan to be described. If not arrested, the membrane may spread to the larynx, trachea, bronchi, the nasal cavities, Eustachian tube, middle ear, the eye, involving loss of vision, the lips, or any of the outlets of the body, and in an epidemic may attack an ulcer existing on any part of the derma. The first distinctive sign, the grayish-white patch, may be preceded by slight inflammation. It may become reddish-brown and varies greatly in consistence. If the deep tissues are involved, the removal of the membrane frequently discloses ulceration. If not arrested early, the tonsils and adjacent parts become greatly enlarged. The microscope reveals bacteria, micrococci, pus cells, epithelial cells and red blood corpuscles in the fibrous membrane.

There is a difference of opinion as to the pathology of the disease. One view is that the vegetable germs find lodgment in the throat in the first instance, migrate to other parts of the body and so the disease becomes general. Another, that it is general from the beginning and that the local manifestations are secondary.

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* Read before the North Carolina State Medical Society, May, 1893.

It is generally admitted to be contagious, and also to be produced by neglect of sanitary precautions. The contagion seems to be feeble in some instances, so as to lead to the denial occasionally of its being communicated in that way. Many striking instances, however, of its contagiousness, or at least of its portability, could be cited.

Now, it cannot be denied that from the pathology and symptoms, the antidote must be distinctly antiseptic and germicidal, also that it must be tonic and alterative. The disease is rapid in its course and the success of any line of treatment depends on an early application of the remedies, for if through delay it is allowed to enter the air passages, the chance of recovery is greatly lessened. Adopting this view and adapting this mode of treatment thereto, the phenominal success of it verifies its correctness and proves it to be founded on scientific principles and to be devoid of empiricism.

Before detailing the plan of treatment pursued, the outline of the history of some epidemics which came under the observation of the writer, extending back through years, will be premised.

In the autumn of 1886, an epidemic of diphtheria presented itself in a locality between Wildon and Loston, in the county of Halifax, whether through contagion or neglect of sanitary precautions did not appear. There were many fatal cases, in one instance three deaths in one family, and the attending physicians pronounced it to be of a most malignant type. The epidemic extended and entered the bounds of the writer's practice. The first case had most careful attention. The course of treatment was such as had been inculcated by reputable authors. In spite of every means it marched steadily on to a fatal termination. Before being called to another case the plan of treatment to be cited occurred to him, and in the twenty cases following there was not another death. In fact its course was nearly arrested, very few cases having occurred beyond, and these all terminated in health, the success in the twenty cases having induced the attending physician to adopt the same course. In the years next succeeding sporadic cases occurred from time to time which yielded readily to the same treatment.

In the autumn of 1892, the author was called to the case of a girl, aged about 12 years, who had been under the treatment of a practitioner for five or six days and declining steadily, till at the time I saw her, it is fair to say she was *in articulo mortis*. She died during the succeeding night. This case was followed by three others in the same family, but the early application of the remedies was so efficacious that it prevented the necessity of confining any one of them to bed. During the next week,in a family near-by where there were seven children between the ages of two and eighteen, the disease presented itself. Having been called to its treatment, and the mother being a woman of strong sense and a good nurse, the medicines were prepared, the directions given and the management of the cases was committed to her. She carried them all through safely without other medical advice. About the same time a case appeared in the person of a small boy of a neighboring family and the same course of treatment soon restored him. A neighboring physician,observing its action, adopted it and relates remarkable cases of recovery from its use.

We now come to the indications of treatment as suggested by its known attribute. It was stated above that germicides, tonics and alternatives have yielded the best results. Some years back in a prize essay by the late Dr. E. S. Gaillard, he warmly advocated a combination of muriatic acid, tincture muriate of iron and potassium chlorate, to be taken internally. This was a most fortunate conception. For this combination on the addition of water sets free much of that efficient and excellent germicide *chlorine,* and yields to the system the tonic iron so much needed in the asthenic condition of the system appertaining to this affection. It is a remedy highly approved by many and will of itself undoubtedly prove curative in some cases. But it fails in some instances. A combination of fluid extract of pinus canadensis and phenic acid, applied locally, has been much extolled. The pinus canadensis, as an application to inflamed and ulcerated surfaces, was highly commended by the late J. Marion Sims, and the writer in various affections has verified its claims as a curative. The addition to it of phenic acid brings another powerful antiseptic to the aid of chlorine, and the septic tendency of the disease seems at once to yield to the potency of the two. Now, it occurred to the writer that if this constitutional remedy, as suggested by Gaillard, and the excellent local application of the pinus canadensis and phenic acid were used in conjunction, it would most probably arrest the rapid advance of the sepsis if applied early in the attack. The result, after long and thorough trial, verified his most sanguine hopes and in these two applications, constitutional and local, we have a remedy, a specific for diphtheria, if there is a specific for any disease. So that while the writer claims no credit as the discoverer of the disunited elements, he does claim to have first suggested, so far as he knows, the combination which seems to be the *ne plus ultra* as to the treatment of diphtheria.

The details of treatment are these: As soon as the patient is seen, and not delaying for the action of a cathartic or other medicine, begin to combat the poison at once by the administration of two tablespoonfulls every hour for adults, and proportionally less for children according to age, of the following preparations: Potassium chlorate one drachm; dilute muriatic acid two fluid drachms; tincture muriate of iron two fluid drachms; water twelve fluid ounces. Diminish to one or two doses at night, with tonic doses of quinine, three times a day. The above compound is not objected to much by children. Immediately after its administration, proceed to mop the throat, after depressing the tongue, with a mixture of fluid extract of pinus canadensis one fluid ounce, and phenic acid gtt. 10 to 15. The mopping is repeated after each dose of the solution. The mop may be made of a small twig with a little lint bound to the end. This simple implement is given instead of a more artistic one because so easily obtained. The mopping should be done so as not to wound the tender mucous membrane. Petroleum, applied externally to the throat, is advisable.

Under this treatment improvement begins at once. The fibrous matter ceases to accumulate. That which has already appeared turns black, being stained by the red pinus, contracts around the edges and in a few days drops off and amelioration of all the symptoms becomes obvious. Unlike the plan of treatment proposed by Dr. Martindale, of New York, at your last meeting, this course of treatment does not require an air tight room so difficult of attainment in many localities, or an oil stove quite as much so, but may be applied easily and speedily anywhere.

CLINICAL LECTURES.

MERCURIAL PTYALISM; HEPATIC ABSCESS.

CHARLES CARY, M. D., Buffalo, N. Y.†

The first patient whom I present to you this morning illustrates the condition of ptyalism, which is usually produced by the administration of one of the purer forms of mercury. The patient states that for two weeks before coming into the hospital, he had been rubbing a mercurial ointment into his arm. Just how much he has used we do not know, except that it was a boxful. It is not important, however, to know either the weight of the ointment or its strength, for the amount absorbed depends largely upon the faithfulness of the patient in carrying out the instructions to rub the ointment well into the skin, and upon the activity of the skin circulation, the thickness of the cuticle and other more obscure conditions. Again, there is a great difference in the susceptibility of different patients to the action of mercury. Ptyalism has been produced by a single vaginal irrigation.

When the patient entered the hospital, his tongue and lips were swollen, the cavity of the mouth could hardly be distinguished, the gums were tumid, softened and ulcerating, while the teeth and tongue were covered with sordies so that the breath was extremely offensive. The tongue is still covered with a creamy exudate, with the suggestion of ulcers at the side. Those of you who are near the patient can also notice the odor of mercurial stomatitis. One of the earliest symptoms of mercurialism is a sense of sticking together of the teeth. You must warn your patients who are taking mercury to be on their guard against this development. Direct them to strike the teeth together occasionally. As long as they meet firmly and without sensitiveness, the mercury is not being given in excess. If, however, the teeth seem to the patient to meet as if there were glue between them, or if they seem too long, as if forced from their sockets, the medicine must be discontinued, or, if it is a case of urgency, continued with caution. At this time fetor begins to be apparent. If the drug is pushed, the gums become inflamed and spongy, they bleed easily and the fetor becomes intense. With the gingivitis—inflammation of the gums—there is a glossitis and the tongue finally becomes so much swollen that the patient can hardly speak. Saliva is secreted in large quantities, particularly during sleep and the driveling often saturates the pillow. It is this symptom that gives the name ptyalism or salivation to mercurial poisoning which most frequently manifests itself as a stomatitis.

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†Professor of Materia Medica and Therapeutics, and of Clinical Medicine, University of Buffalo.

Patients are apt not to return for further treatment until their medicine is taken or their ointment is used up. I saw one case in which a patient neglected to report for observation till tremors had set in, indicating an involvement of nerve centers, and until the stomatitis had progressed so far that half the jaw-bone became necrotic and came away. Other things being equal, young persons will stand a great deal more mercury than older ones. Syphilis, on account of which mercury is is most frequently given, usually affords a tolerance of the drug, but this is not always the case, and the only safe plan is to watch each person to whom mercury is administered as if he were particularly susceptible to its effects.

One of the first remedies to be dispensed to a patient with ptyalism is a tooth-brush, a soft one, for the parts are exquisitely tender. An immense amount of offensive creamy exudate, which is itself irritating, will be found about the teeth. It is well to use a mild astringent and antiseptic wash for the mouth. Myrrh is commonly used. It is agreeable in odor and taste and it is moderately antiseptic and astringent. Advice should of course be given to discontinue the mercurial. Paradoxical as it may seem, there is a tendency to treat these cases with solutions of bichloride of mercury (1: 10,000) which are antiseptic and feebly astringent and which do not introduce an appreciable amount of mercury into the system. Personally I am not particularly impressed in favor of this treatment. In old times, when mercury was given more frequently and more lavishly than at present and when severe cases of ptyalism were much more common, potassium chlorate was used as a wash with good success, and I believe that the antiseptic element is important in the treatment.

Later on, in the period which this young man has reached, it is advisable to administer potassium iodide to remove the mercury from the system as a soluble double salt of potassium and mercury. This salt is eliminated largely in the saliva, so that if the iodide treatment were begun too early there would be an aggravation of the stomatitis. It sometimes happens that syphilitic patients show no indications of mercurialism under mercurial treatment but suddenly develop a stomatitis when iodide of potassium is commenced. Time is a great factor in the treatment of ptyalism. In another patient, who is still in the hospital, ptyalism appeared while mercury was being administered in double doses, internally and by innunction. He, however, had active manifestations of syphilis in the form of mucous patches and a mascular eruption—and I did not consider it advisable or necessary to interrupt the antisyphilitic treatment, more especially as the stomatitis was not severe. Accordingly he continued to receive the red iodide of mercury in doses of two milligrams, or one-thirtieth of a grain. A week or two of discontinuance from mecury will usually allow ptyalism to subside unless it has reached a high grade of inflammation. In the present instance I am not at all sure that there is syphilis to treat and, accordingly, the patient will be carefully observed after the mouth symptoms have subsided, before returning to mercurials.

The next patient is a Swede, aged 33, married, and a tanner by occupation. He was admitted two weeks ago with this history. "Parents living and healthy, one brother healthy. Patient came to this country ten years ago. Has always been considered well till three weeks ago when he was taken with a chill followed by fever and a steady severe pain two inches above the umbilicus and to the right. Bowels constipated; feces whitish; appetite poor. On admission, tongue coated white with red streak in middle. Pulse 90, temperature 97°." The pain was not constant, but would come in paroxysms during which the man would writhe in bed though his courage kept him from crying out. Examination of the abdomen revealed little or nothing except that some one had punctured him at about the seat of the pain. Before he had been in the hospital twenty-four hours, he had a severe chill which shook the bed. His pulse went up to 130 immediately; the temperature was not taken because he could not keep still. On the next day he had another chill in which the pulse rose to 160 and then became imperceptible, while we succeeded in taking the temperature which was 104°. The patient threatened to die in collapse but he was revived by diffusible stimulants. We were on our metal to do all that was possible for him as he had told us that he had gone on for some time without relief and had come to us from Port Alleghany to be cured. On reëxamining him I determined that there was a slight bulging in the right epigastrium and hypochondrium. Upon percussion, his liver seemed enlarged and posteriorily I could detect quite a degree of tenderness. Pressure in front also elicited some complaint of pain. At this examination—which was made at eleven o'clock at night—the diagnosis of abscess of the liver was reached. The introduction of an aspirator needle suggested itself, but I reflected that if I made a puncture and struck pus, I was not prepared to operate and the withdrawal of the needle would infect healthy tissues. Even if the peritoneal surfaces had become agglutinated so that a septic peritonitis would not be set up, the wound of exit would be converted into a sinus. We waited accordingly till the next morning when I asked Dr. Park to make the exploratory puncture, indicating to him the point at which pus was expected, and requesting him to be ready to follow the puncture with a rapid evacuation of the abscess.

The patient was etherized and pus was found to a depth of 2½ inches. It had the usual characteristic odor of pus from the vicinity of the intestine—such as is observed in ischio-rectal phlegmon. Once smelled, this odor is not forgotten. Some claim that the odor is due to the amœba coli. In cutting down on the liver it was found that the peritoneum had not become involved, that the liver was sliding up and down in front of the orifice with every respiration. In order to prevent infection of the peritoneum, the opening was made very large and iodoform gauze pushed into the aperture so as to make an antiseptic ring about the site of the intended puncture of the liver. Three or four pus-basins were filled with the contents of the abscess which was not like the usual discharge. This pus was gelatinous and transparent, whereas the pus of hepatic abscess is usually like tomato catsup, reddened with blood and darkened with disintegrated liver cells.

Relatively speaking, hepatic abscess is rare in this section of the world. In India, Mexico and other hot climates it is not uncommon, being due to the absorption of infectious material from the intestine. The starting point of the infection is a colitis, a dysentery without the ordinary conspicuous evidence of inflammation of the colon, being due to the amœba coli which does not cause the pain and the discharge of mucous and blood such as occur in other dysenteries. The resulting abscesses in the liver are usually large and single. Multiple hepatic abscesses usually develop in the course of pyæmia from infectious emboli. Sometimes traumatism is a cause of hepatic abscess. Not long ago I had a case occurring in a railroad man who was caught between two bumpers. The ulceration about gall-stones is another source of hepatic abscess. Rarely, there is absorption of septic matter from typhoid ulcers in the ilium or from typhlitic suppuration.

In the present case, I am rather inclined to think that the cause was a gall-stone, largely because no other cause can be found. The favorable course of the case precludes the idea of pyæmia, the amœbæ have not been found and if the abscess were due to them we should expect a fatal termination. There is nothing in the history to point to typhoid fever inflammation about the cæcum or todirect injury to the liver. Gall-stones often exist through life without making their presence known till they are discovered at the autopsy. When, however, they serve as the exciting cause of a hepatic abscess, we expect some jaundice due to the plugging of a bile channel, whether the calculus is in the liver or in the gall-bladder or in the larger ducts. This symptom has been lacking in the present case.

Commonly, patients with hepatic abcess die; this man bids fair to be a favorable exception. The prognosis in pyaemic abscess is almost utterly hopeless. Even in the case of single abscesses, the cachexia produced by the septic absorption before the disease is recognized, commonly pulls the patient down so far as to preclude recovery. There was a group of symptoms in this case which at first made me hopeful that the trouble was less serious than it proved to be and which I wish to emphasize because it has often led to an erroneous diagnosis and postponed surgical treatment. The chill and fever occuring daily, the enlargement of the spleen and of the liver suggested malaria. But, when at the expiration of two days the condition was not relieved by the vigorous use of Warburgh's tincture, I waited no longer before urging Dr. Park to operate. The enlargment of the liver in these cases, which mimics intermittent or remittent fever, is due to a circumscribed collection of pus; the spleen is enlarged on account of the obstruction to the portal circulation in the liver; the chills and fever are due to the absorption of ptomaines. Too often, however, the differential diagnosis is not made till the autopsy is performed.

Aside from symptomatic and supporting medication, the treatment of hepatic abscess consists in operation. Even this in the case of pyaemic abscesses offers no hope, but in single abscesses an exploratory puncture should be made early and the abscess opened and drained if found. It is unwise to make an exploratory puncture unless the operation can be performed immediately, if necessary. I would, therefore, suggest that uniformly, the patient should be etherized and the instruments and dressings needed for the operation be laid out before the puncture, is made.

This patient was operated upon on the third day after admission to the hospital. It is now eleven days since the operation; he is still doing well and his recovery is confidently expected.

COMMUNICATIONS.

ON THE INCREASING PREVALENCE OF SCABIES.

HENRY W. STELWAGON, M. D., PHILADELPHIA.

Under the same title, Dr. James C. White, several years ago called the attention of the profession to the increasing frequency of this disease, especially with reference to his own city, Boston.[1] This same tendency had been observed by me for the several years previously in Philadelphia, and had, indeed, been so striking that, at that very time, a great part of the data here presented was prepared for publication. Since then the proportion has kept its high place, and has, upon the whole, with slight fluctuation, been steadily growing, so that, at the present time, in the dispensary practice of this city, this disease constitutes ten to fifteen per cent. of all skin cases. The following table (Table I) summarizes my own observations at the various services for skin diseases with which I am or have been connected.

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*Read before the Pennsylvania State Medical Society, 1893.

[1] The Boston *Medical and Surgical Journal*, February 14, 1889.

Table I. Showing the Increasing Prevalence of Scabies in Philadelphia.

		1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Phila. Disp. for Skin Diseases.	No. patients.	217	308	331	279	239	388	277	433	642	688	451		
	Scabies.	8	5	9	3	11	14	20	48	100	66	52		
	Percentage.	3.69	1.62	2.72	1.07	4.0	3.61	7.22	11.09	15.58	9.59	11.53		
Northern Disp. Skin Service	No. patients.	440	464	460	538	405							485	500
	Scabies.	3	10	13	16	16							64	61
	Percentage.	0.68	2.15	2.83	2 97	3.95							12.93	12.2
University Hosp. Skin Disp.	No. patients.					448	402	396	515	433	435			
	Scabies.					3	13	13	24	38	28			
	Percentage.					0.67	3.23	3.3	4 66	8.77	6.44			
Philada. Hospital Skin Ward.	No. patients.								77	110	103	180	163	152
	Scabies.								9	18	15	11	11	12
	Percentage								11.7	16.36	14.56	6.11	6.75	7.89
Howard Hospital Skin Disp.	No. patients.									241	182	213	295	149
	Scabies.									12	29	6	39	18
	Percentage.									4.98	15.93	2.82	13.22	12.08
Jefferson Hospital Skin Disp.	No. patients.											438	841	538
	Scabies.											37	146	90
	Percentage.											8 45	17.36	16.73
Totals.............	No. patients.	657	772	791	817	1092	790	673	1025	1426	1408	1282	1794	1339
	Scabies.	11	15	22	19	30	27	33	81	168	138	106	260	181
	Percentage.	1.67	1.94	2.78	2.32	2.75	3.42	4.9	7.9	11.77	9.8	8.27	14.49	13.52

It will be clearly seen by a glance at this table that the itch is becoming a common disease among the poor, and that it is not limited to particular parts of the city, although it is, it is true, much more common at those centers toward which the foreign population trend. For example, the Northern Dispensary and the Jefferson College Hospital show the largest proportions, the former being close to the German population and the latter near the Italian and Russian Quarters. Moreover, it is not to be inferred that the percentages here given, although large, really represent the actual prevalence of the disease, for it is much more common than here noted—it is the custom in connection with dispensary services to record only such cases as personally present themselves, whereas, often enough, the patient is but one of a whole family affected.

Nor is this increase limited to one or two sections of our country, but it is widespread; naturally it is more frequently seen in our eastern seaport cities. This general prevalence is shown in the next table (Table II), made up from the returns of the various members of the American Dermatological Association as published in its Transactions:

Table II.* Showing the Increasing Prevalence of Scabies in Boston, New York, Baltimore, Chicago and St. Louis*

		1880	188 1	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891
Boston...............	No. patients.	3315	3264	3212	3190	3228	4054	4401	4515	4782	3460	3012	5310
	Scabies.	29	22	67	96	179	224	334	374	494	368	254	392
	Percentage.	0.87	0.67	2 08	3.01	5.54	5.52	7.59	8.28	10.33	10.63	8.43	7.38
New York...........	No. patients.	3326	3837	3231	6684	2737	3596	5692		2439	8055	914	487
	Scabies.	35	64	76	132	52	36	178		151	282	87	31
	Percentage.	1.05	1·66	2.35	1.97	1.89	1.	3.12		6.19	3.5	9.52	6 36
Baltimore...........	No. patients.	663	503	520	623		1132	673	1075	489			2405
	Scabies.	9	6	6	2		8	8	24	24			111
	Percentage.	1.35	1.19	1.15	0.32		0.7	1.19	2.23	4 9			4.61
Chicago...............	No. patients.	2587	2100	2564	3167	2414	2675	2546	2010	2979	2741	1832	2744
	Scabies.	14	31	22	72	56	56	34	72	59	80	48	97
	Percentage.	0.54	1.47	0.85	2.27	2.32	2.09	1.33	3.58	1.98	2.92	2.62	3.53
St. Louis.............	No. patients.	260	264	224	450	555	888		1009	1075	1026		1628
	Scabies.			1	7	13	74		36	27	28		47
	Percentage.			0.24	1.55	2.34	8.33		3.56	2.51	2 72		2.88
Totals................	No. patients.	11047	11076	11402	15490	8934	14007	14666	10366	14253	17544	6784	12574
	Scabies.	100	134	202	334	300	442	632	643	965	960	426	678
	Percentage.	0.9	1.21	1.77	2.15	3.36	3 15	4.31	6.2	6.76	5 53	6.57	5.39

* Includes both dispensary and private cases.

When a disease of the character of scabies becomes so common among the poor, it may be certain that sooner or later it will, through many obvious channels, find its way among the better classes; and this is, indeed, already the fact. It was not until six or seven years ago that I saw a case in private practice, and then only one or two cases a year, whereas, now, an observation of ten to twenty cases is not unusual. This, I feel certain, is also the experience of my colleagues in Philadelphia and in other parts of the United States, as indeed the following table (Table III) compiled from the Transactions of the American Dermatological Association will show:

Table III.[*] Showing the Increasing Prevalence of Scabies in Private Practice throughout the United States.

	1880	1881	1882	1883	1884	1885	1886	1887
No. Patients.	2848	2641	3554	3656	2931	3737	2481	2849
Scabies.	15	7	26	34	33	49	56	62
Percentage	0.52	0.26	0.73	0.93	1.12	1.31	2.25	2.17

In seeking for causes for this increasing frequency, several of the more potential factors, which, according to my observation, are to a great extent responsible, should be referred to. Of first importance is the character of recent immigration. It is common knowledge that the average of the present immigrant is far lower in cleanliness, etc., than obtained some years ago, and this extremely undesirable class, largely made up of Russians, Poles, Huns and Italians, have, especially for the past eight or ten years, been arriving here in great numbers. Judging by dispensary observation it would seem that the itch is the normal state in the steerage of to-day, and many of those even who are free from the disease when embarking, are fairly certain to acquire it on their way over. These cases arriving in our midst are so many additional foci for its spread.

Another factor in its increase and not an unimportant one, is the "day nursery." An affected child is placed here for the day; it comes closely in contact with its comrades, and before its short sojourn is over, several more cases have had their origin and are themselves carriers for the further spread of the disease. The children's "home" and "asylum" are likewise often responsible, for it is not unusual to find that the invasion of a whole family may be traced to the return home of a child temporarily placed in such an institution. These statements are not made at random, but are based upon repeated observations. The cheap lodging houses are also fruitful centers of contagion; many of the Philadelphia (charity) Hospital cases have their origin in such places.

Another element in its increase, especially among the better classes, is to be found in the growing tendency to travel, and the rapid multiplication of traveling salesmen and drummers. With ordinary and proper precautions on the part of hotels this factor should sink into insignificance, but it is extremely doubtful if the linen in the average hotel is always changed or changed in its entirety after a single night's occupation, and yet, if not, and had an affected person slept therein, the next occupant will almost assuredly contract the disease. I mention this method of spread for the reason that in a large proportion of private patients whom I have treated for scabies, the disease could be distinctly traced to such a source; nor were the cheaper hotels alone culpable. Finally the failure on the part of physicians to recognize the disease, especially when ill-developed or in its beginning stages, must be looked upon as an important element in explaining its increasing prevalence. This is not said to reflect upon the profession, for it is the result of lack of opportunities. Graduates of the present day, if they make use of their advantages, are pretty well schooled in the recognition of this disease. As it is now a common one at the clinic; but some years ago, during my own student days in fact, the presentation of a scabies case was rare.

There are several points regarding the eruption which if kept in mind, will serve to prevent error in diagnosis—distribution, itchiness, multiformity, the presence of burrows (cuniculi) and the linear character of many of the lesions; inquiry will, moreover, in a majority of the cases, disclose the existence of the disease in a bedfellow, comrade, or in others of the family. The burrow, which is pathognomonic, is not always present. Special stress, in my opinion, should be laid upon the distribution and the linear character of the lesions as diagnostic symptoms of great value and invariably present. Some or many of the lesions are always found to be longer than they are broad, appearing as elongated or oblong papulles, vesicles and pustules; scattered lesions of this kind, especially when seen about the fingers and hands, wrists, axillary folds, shaft of the penis, and anal region, even though few in number, should always excite suspicion. As a rule, private cases are most difficult to recognize, inasmuch as such persons are usually extremely solicitous about any skin irritation, take daily baths, use soap and water freely, so that the disease is measureably held in check and the eruption remains scanty. It is not rare in some of the private cases to find but two or three lesions upon the fingers or other parts of the hand, possibly a few on the wrists, one or several on the penis with here and there an excoriated papule or a scratch mark over the lower trunk. Even in private cases the anal region is a common site for several or more lesions.

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[*] After 1887, the private and dispensary cases were merged in the returns. Since that date, private cases have, according to my own experience and that of others, increased almost as rapidly, unfortunately, as have dispensary cases.

The treatment is well-known. It is as simple as it is efficacious, and every case thoroughly and quickly cured frees the community of a moving and active contagion. In the average case of the dispensary class, I have usually prescribed a compound ointment, consisting of an ounce of sublimed sulphur, an ounce of Peruvian balsam, thirty to sixty grains of beta- naphthol, and sufficient benzoated lard or petroleum ointment to make up four ounces. The patient is directed to take a soap and hot water bath; ordinarily any good toilet soap will answer, but in those of sluggish, thick skin, or of filthy habit, a good sulphur soap or sapo viridis is preferable. After the bath the ointment is to be energetically rubbed in over the whole surface from the chin down, special attention given to the parts most affected. The back should not be neglected, the application to this part being preferably made by another person. Clean linen is put on and clean bed linen used—the soiled linen is to be boiled. At the end of ten or twelve hours another application of the ointment is made, and so on for six applications. During this time the same linen is worn. Some hours or a half day after the last application, another bath is taken and a complete change of linen made. The linen which had been worn, as, in fact, all the underwear and bed-linen before being used again, should be thoroughly boiled. By boiling, all stray parasites and their ova are destroyed.

During the treatment it is advisable to have a dusting powder of sulphur sprinkled in the bed, in the bureau drawers, and in other suspicious places. All outer clothing should be subjected to high temperature if possible, or thoroughly beaten and hung out in the air and sun. Other members of the family should undergo inspection, those affected should be treated as above, and those doubtful advised to make two or three thorough applications. It is only in this manner that the disease is cured and recurrence prevented. In young children and infants the beta-naphthol is omitted in the above ointment and the quantity of sulphur reduced one-half. In these younger cases, particularly infants, the disease often invades both face and scalp also, especially the lower part of the former, and this fact should not be forgotten in the treatment. In private practice I have commonly prescribed the same ointment, with beta-naphthol omitted; in some cases also an ointment of equal parts of styrax and lard; two to four applications will usually suffice in these patients.

To control the cutaneous irritation which is not infrequently set up by the disease or by the sulphur applications and which sometimes persists for several days or longer after active treatment has been discontinued, it is well to advise the application, two or three times daily, of a saturated solution of boric acid containing one to three drachms of carbolic acid, two drachms of glycerin and four drachms of alcohol to the pint. Should the treatment have been inefficiently or carelessly carried out, as not infrequently happens in dispensary practice, evidences of an active return of the disease will soon appear, and a repetition of the plan described above, somewhat abbreviated, will be found necessary.

As to controlling the spread of the disease in the broad sense of the term, and placing it again low down among the comparatively rare skin diseases, I am convinced much can be done. The recognition and prompt cure of each case as soon as it is presented, as already remarked, is a step in the right direction; patients should be cautioned as to the contagious nature of the disease. Moreover, there is absolutely no reason why an immigrant with the itch should be allowed to land; the disease may be rapidly cured when circumstances demand it by employing much more energetic measures than those already mentioned, but which need not be outlined here. Such an immigrant may be rendered entirely harmless in an hour or so by vigorous treatment, during which time his clothing and effects could be baked, steamed, or sulphur-fumigated. Energetic treatment of this kind, it is true, leaves the skin in a state of active irritation, but this, with several days' use of a mild soothing ointment, will subside. Infants and young children should be carefully inspected before being admitted to "day nurseries," "asylums" or "homes," and if found with any evidence of skin disease, should be rejected till a professional assurance of its harmless character is obtained; the same rule should be applied in the admission of children to the public schools. Hotels, small, or large, should be legally required to make a complete change of bed-linen before the bed is assigned to another occupant—to say nothing of why this should be done for many other reasons. Lodging-houses, to which cases may be clearly traced, should be reported to the Health Board for investigation and for the institution of proper measures for disinfection.

It is, I know, a common thing to speak of the itch with more or less humor, as a joke, but it is an exceedingly unpleasant experience for the immediate victim, his family, aud the community at large. A disease so readily cured, so readily controlled, and so readily preventable as this, has no reason for its existence in our midst, certainly not to such a great extent as it exists at the present day.

ABDOMINAL SURGERY BY UNTRAINED OPERATORS, WITH DEFICIENT APPLIANCES.

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The discussion going on recently in regard to the recognition of emergency work in surgery indicates that while the higher types of operative procedures should always have precedence, there is a place for that class of measures called for at times by the necessities of the case. Of course, no one unqualified for surgical work or without the means of executing it properly, should undertake the management of a case when a surgeon of experience can be secured to do it. But the question is raised, whether in the absence of an expert operator, any member of the profession who is called to see a patient suffering from recent traumatism should feel authorized to meet this exigency with promptness by a life-saving operation when delay would prove fatal. If it were a case of hemorrhage from the division of an artery, though temporary compression would arrest the bleeding for the time, it could not avail for permanent relief, and ligation of the vessel should be resorted to even by the most inexperienced practitioner, without the ordinary appliances for such an operation.

But the class of cases which has elicited this discussion is of a different nature, and there may be degrees of urgency, in all of which interference is not imperative, and in regard to which it is questionable whether an untrained operator would be warranted in proceeding. This issue is made now especially in regard to penetrating wounds of the abdomen and thorax. Should there be a protrusion of the abdominal viscera from an incised wound of the parietes, and it was found that the coats of the intestine were cut or that a mesenterie artery was divided, it is evident that there should be no hesitation on the part of the medical practitioner, least qualified for surgical work, about proceeding to suture the opening and ligate the vessel, without waiting for a specialist. But in the event of perforation without protrusion, a grave question arises in the diagnosis and scarcely less grave in the results of cases left alone, are those which have undergone laparotomy. It is not generally taken into account that the facts as recorded, show a larger mortality from the cases of abdominal injury which have been operated upon, than from those treated without operation. I drew attention to this matter in the discussion of Dr. Link's paper before the surgical section of the American Medical Association at Milwaukee, and the inferences may be drawn, that if the percentage of mortality has been increased by laparotomy in the hands of skilful operators, we should not expect better results from unskillful use of the knife and the needle. It would seem, therefore, unwise to encourage the laying open of the abdomen by medical men without surgical experience in this class of cases. It is preferable to leave a patient with an abdominal injury, that may or may not suffer from a visceral lesion, to be treated without operation, to having an operation performed without all due precaution in the steps taken from beginning to end. The great practical deduction to be made from a consideration of this subject is that abdominal surgery should receive the most careful attention of those who expect to undertake the treatment of visceral injuries, and in view of the mortality which has attended laparotomy in this class of cases, it is not expedient that those without skill and experience should be encouraged to open the abdomen.

CLINICAL ASPECTS OF PNEUMONIA IN CHILDREN.*

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Clinically and pathologically, we divide pneumonia into a fibrinous, croupous or lobar type, and a catarrhal, lobular or broncho-pneumonia. There is also an interstitial variety which is rarely seen and upon which I shall not dwell.

I use the terms "lobar" and "broncho" when speaking of the divisions, as they to my mind more clearly define the condition present.

Oftentimes, clinically, one is unable to differentiate these forms, and even macroscopically at the autopsy, we are unable to distinguish a broncho-pneumonia from a generalized croupous pneumonia; so it remains for them to be classified for us by the pathologist.

The differences pathologically I will not mention, but will endeavor to point out wherein a diagnosis may be made from a clinical standpoint alone.

Lobar Pneumonia: This form is generally primary; its onset sudden, ushered in by a chill or a slight chilliness, perhaps by a convulsion or convulsive twitchings; there is generally languor, headache, and an initial temperature above 101°; there may be vomiting with or without diarrhœa.

The appearance of the child is suggestive; there is pallor, an anxious, pinched expression, the face drawn, the alæ nase active, the respiration hurried.

Frequently its onset resembles very much that of scarlatina, but upon the non-appearance of the rash, pneumonia should be suspected and a careful examination of the lungs be made.

As to the method of examination; care should be taken not to expose the little patient more than is absolutely necessary. It should lie either upon the lap or shoulder of mother or attendant, the endeavor being made to distract attention from the minutæ of the preparations. It is my opinion that a thorough auscultatory examination of the chest cannot be made without the aid of the stethoscope. With it we are able to localize a small area of pneumonia. We can auscultate high up in the axilla or in the clavicular regions—favorite sites for consolidations—which in a thin or emaciated infant would be impossible with the ear alone. I use the binaural stethoscope with the concealed spring by which the pressure in the ears can be regulated and will remain constant—an end which we are unable to accomplish with the rubber band generally used.

Physical signs : These may be present at the initial examination, but they are oftentimes delayed until the third or fourth day, and indeed there may never be present the typical signs of a consolidation.

Upon auscultation, if seen early and signs are not delayed, we may expect to find at first evidences of a more or less consolidated lung, distant or weak vesicular breathing, or if the consolidation is near the surface pure bronchial breathing more or less distinct. Care should be taken not to mistake the exaggerated compensatory breathing heard over the opposite lung or normal part of the affected lung, for bronchial breathing which it oftentimes simulates very closely. Pleuritic friction sounds or loose mucous râles are heard over the affected area; the former "we may expect to find when there is a large area of consolidation present." *

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* Read before the Falls City Medical Society, July 13th, 1893; and by title before the Mitchell District Medical Society.

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The *Pneumonic sigh,* which is present in the large majority of cases caused by the short sharp expiration, is a valuable aid oftentimes in eliciting broncophony, or the increased voice sounds, over the consolidated area.

By the child's crying we gain the same ends, and by palpation often, through the thin chest walls obtain vocal fremitus.

Percussion is the least reliable means of diagnosis. There may be marked dullness approaching flatness, slight dullness, or merely a slight modification of the normal pulmonary resonance, or as is most often the case, no change at all perceptable in the percussion note over the consolidated area from that obtained over normal pulmonary tissue.

This fact may be caused by the area of consolidation being superficial, normal resonance being transmitted from sound tissue beneath, or a (perverted) sound may be produced by a distended stomach pressing upon and displacing the lungs.

When dullness or modified pulmonary resonance are present, they are valuable aids in the diagnosis.

The character of the sputum is of no assistance in making a diagnosis as it is rarely seen in a child, being swallowed as soon as dislodged.

The *temperature*: As before mentioned this usually at the onset is above 101°—often 104° or 105°—its course is varied. It may be continuously high, irregular or remittent; in the latter form normal is rarely reached. Most frequently the temperature in lobar pneumonia ends by crisis, especially is this so in children over three years of age; and the most critical days are between the sixth and the eighth, the temperature at this time may fall to an unusually low point, so much as 8° or 10°, frequently reaching 94° or 95°.

A post-crisis rise often occurs, the temperature rising a degree or two following the crisis, reaching normal the next day. If this rise is prolonged we may suspect a complication, either the extension of the process into new areas of the lung or a pleurisy or an empyema.

Broncho-pneumonia: In the majority of cases this form of pneumonia is secondary to a bronchitis, or occurs co-incidently with, or as a sequela to, the exanthemata —or to pertussis or other wasting diseases.

If bronchitis precedes an attack we have an aggravation of the symptoms present. Respiration becomes more hurried, dyspnœa often marked, the temperature rises as a rule; in short the symptoms already present are exaggerated. There may be present bronchial breathing, but it is more frequently absent, our diagnosis being largely made up then "from the severity of all the general symptoms, cough, prostration, restlessness, dyspnœa, and cyanosis.*

The temperature in broncho-pneumonia is variable, no typical course being followed. In the majority of cases it is high and remittent, in others it is 103° or below, but it is not infrequent that we have a temperature running below 101°, sometimes even subnormal; the latter occurring more frequently in children who are delicate than among those of robust condition.

There is generally an evening exacerbation but it is not unusual to meet with the opposite condition, a higher morning temperature, lasting for several days. The subsidence of the temperature in this variety is by lysis. The duration very varied, cases being reported where it has lasted fifty-one days.

As to physical signs—the absence of both dullness and bronchial breathing does not by any means preclude the presence of pneumonia, for the patches of consolidation may be so disseminated with normal pulmonary tissue intermixed, as to cause no deviation from the normal pulmonary resonance or change in the respiratory note, except perhaps a slight weakening of the latter. The presence and the character of the râles and particularly their location is of importance. Finding a localized area of râles either on one or both sides should cause pneumonia to be suspected, especially if over one or both lower lobes behind.

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* Holt Archives Pediatrics.

*Holt.

Complications: In both forms of pneumonia the appearance of a complication is serious. Pleurisy more or less severe is generally present with pneumonia, but an extensive inflammation of the pleura with or without exudation or an empyema either of which may be associated with pneumonia, greatly retard convalescence and resolution.

A co-incident inflammation of other organs may occur—of the kidney or pericardium; jaundice is often seen and diphtheria may develop. Meningitis is frequently met with as a complication principally in the lobar type, but I think it a mistake as is the wont of some authors to give to the location of the consolidation a causal relation to the meningitis. It has been said that when the apex is involved, meningitis, convulsions and other nervous symptoms are particularly liable to occur, but my post-mortem experience has shown them to have occurred with as great frequency when the consolidation was located elsewhere.

A chronic pneumonia, or caseation may be the result of a broncho-pneumonia and enlarged, suppurating and caseous bronchial glands are often found following this variety.

The *prognosis* in uncomplicated cases of lobar pneumonia is good, the mortality being only about 2 per cent.; that of broncho pneumonia has been variously stated. Holt gives it in 161 cases at 64 per cent.

The *diagnosis* in most cases is not difficult, though there are cases of broncho-pneumonia which simulate very much the lobar type, and which from first to last are open to doubt. The sudden onset of the lobar variety, not following any other disease, the rapid development and clear limitation of the pathognomonic signs, the crisis in the temperature, and the rapid resolution decide us in this type. Contrast the slow development of a broncho-pneumonia, perhaps following a bronchitis, or occurring during a summer diarrhœa, the irregular temperature and its slow fall, the ill-defined signs and delayed resolutions.

In conclusion a word in regard to the improper use of the term "capillary bronchitis" so prevalent among medical writers and statisticians. It is impossible for an inflammation of the bronchi to occur in an infant without the morbid process extending to and involving the surrounding structures, and I believe that such are all clinically and pathologically cases of broncho-pneumonia and not "capillary bronchitis."

WHOOPING-COUGH IN AN INFANT EIGHTEEN DAYS OLD.

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On the 25th of June, 1893, I was called to see a child, eighteen days old, said to be suffering from whooping-cough. I found a family of seven children, three of whom were coughing characteristically with whooping-cough. Two had been coughing for about three weeks, and one other, I afterwards learned, came down in a few days. The babe I was called to see, was having paroxysms of strangling or coughing, at intervals of three or four hours, accompanied by asphyxia. Between these paroxysms the child lay comatose, without inclination to nurse, and when an attempt to feed it was made a paroxysm of choking would occur, accompanied with cough. These symptoms had been increasing for three or four days. My prognosis was unfavorable. The child died the following day in a paroxysm. There were unmistakable symptoms of the disease for fully one week previous to its death.

Did the mother receive the poison in her system before the birth of the child, and communicate the disease through the blood to the fœtus? Some of the older children had had the disease years previously, but were now coughing, undoubtedly from inhalation of the atmosphere contaminated by those having the disease. The mother had some slight persistent cough similar to the others, but without the whooping. This case was the youngest subject I ever saw affected with the disease; but there was not the slightest doubt about the character of the trouble.

A TREATMENT FOR FISTULA IN ANO WITHOUT A CUTTING OPERATION.*

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At the San Antonio meeting of the Texas State Medical Association, held in April, 1889, I presented to that body a short paper with the above title, in which I endeavored to explain a very simple procedure for the relief of fistula in ano, basing the claim for the treatment upon the report of five or six well selected successful cases.

The operation consists in first thoroughly cleansing the lower bowel and the fistulous tracts with an antiseptic wash, by means of a suitable syringe. I use for the sinuses a long-nozzled uterine syringe, capable of considerable force, and a twenty-five per cent. solution of peroxide of hydrogen, or a simple carbolized solution, with which the tracts are freely flooded. The next step is to thoroughly divulse the sphincter muscle in the usual way with the fingers. Then again irrigate the sinuses in the same careful manner as before with the same solution, and last with plain water. After this, inject into the tracts a solution of nitrate of silver, forty to sixty grains to the ounce of water. Then with a little carbolized oil, or vaseline, spread upon absorbent cotton and bound to the parts with a bandage, the operation is completed in simple cases.

In cases of the internal blind variety of fistula, openings should be made from the outside with the knife, in order that the pouches which are always formed at the termini of such tracts, and which always contain pus and debris, may be washed out and the sinuses cleansed. The only cutting necessary is in this variety, and possibly the enlargment of some of the external openings for the nozzle of the syringe which is introduced only far enough to inject the fluid. With an experience so limited as mine has been, it would be presumptuous in me to claim to have discovered a treatment that would supercede the long tried and successful methods of our text-books. I can only say that the above treatment is simple, and so far as I have tried it, it has been successful in every instance. Even a case of recto-vaginal fistula operated on in the same manner, recovered in a few days. In this case I may say that I employed a six or seven per cent. solution of carbolic acid, instead of the silver, because I did not have the latter solution with me, not knowing or thinking that I should be called upon to do more than lance an abscess, as I had done before for this patient on two occasions within a year.

The time saved to the patient in this operation constitutes one of its chief advantages. The number of days required to remain in the recumbent position is from four to eight, and with no wounds to dress and keep clean, the patient spends this time in comparative comfort.

I wish it understood that I do not claim anything original in this operation, except, possibly, that I have placed together in an unusual manner, some well known methods and principles.

The necessity of thoroughly cleansing the sinuses, getting rid of all foreign particles and matter, has been recognized and appreciated from almost the beginning of time. Also the divulsion of the sphincter has been employed, and some good results have been reported from this alone. And too, the injecting of irritants into fistulous tracts has been resorted to, and reports have been made of cures resulting from this alone.

But the arranging of these things in the manner and order given belongs to me so far as I know. The rationale of this treatment is based upon some well established surgical principles, together with a reasonable appreciation of the anatomy, pathology and physiology of the parts involved. In the first place we have to deal with the most dependent portion of a long and tortuous tube, the blood supply of which is influenced by gravitation, and whose return flow is through veins that are without valves and against gravity; with a mucous membrane that is in a constant state of hyperemia existing in all persons, it is claimed, whether they have ever had rectal disease or not. And further, we have a large ring-shaped muscle, the sphincter, which has scarcely any bony attachments, and whose fibers are closely adherent to the integument, and blended more or less intimately with the other muscles and structures about the anus. This muscle stands vigilant guard over the great outlet of the human body. It is quite easy, then, to understand that the sphincter is very important, and that it is liable to become wonderfully hypertrophied from inflammatory stimulus during disease of these parts. The longer the disease continues, whether hemorrhoids, fissures or fistulæ, the greater the amount of blood to the parts, and consequently the larger the muscle grows and the stronger it becomes. Thus with increased size and strength there is a corresponding retardation of the return circulation which favors disease, and above all, there is a wonderful increase in the muscular tension of the whole ano-gluteal region. The voluntary power of this muscle is diminished and the involuntary power is proportionately increased, which also favors disease. Now, a fistulous tract, it matters not what produces it—a foreign body that has lodged above the sphincter, a traumatism, constipation, or what not, anything, in fact, that would cause an abscess,—for an abscess under all circumstances, it is claimed, causes the sinus—this fistula, except in the superficial form, has its origin above the sphincter within the bowel, and extends more or less tortuously down by the side of, and exterior to the muscle, and makes its exit through the skin within an inch or two of the anus. Let there be many of them or only a few, the destructive process is the same in all. The high tension of the muscular tissue causes retraction of the severed fibres, in accordance with the only function of muscular tissue, viz., contraction, and the result is non-coaptated walls. It may be likened to a taut suspender. As the rubber threads are cut they retract, leaving an elliptical or round-shaped hole. So in the case of the fistula in ano. Fecal matter, when in a liquid state, is always present in these sinuses, and prevents, together with the abnormal tension of the parts, a union by any plan of treatment other than cleansing and relaxing the tension. This removes the debris and permits the coaptation of the walls. The nitrate of silver is used simply to hasten union, which it does by exciting a temporary inflammation along the tracts, thereby causing a cure before the paralyzed sphincter can regain itself. This is exactly what is done when all of the holes are cut into one, the standard operation for this trouble. The sphincter is severed, which relaxes the surrounding parts and permits the cleansing of the tracts and the coaptation of the walls. Now, it is proposed to do no more than to state what has been the results of my limited experience with the operation which I have had the honor to present to you to-day, and I may be permitted to summarize the advantages claimed as follows:

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*Read before the Austin District Medical Society. 1893.

1. There is from one week to a month saved in time to the patient.
2. There is less danger from incontinence.
3. There is no danger from embolism.
4. There is no suppurating wound to require daily dressing and cleansing.
5. The operation is practically robbed of its terrors.

Certainly, then, the operation is simple, and to my mind reasonable, and therefore I respectfully commend it to your further investigation and trial.

Japanese Double-tailed Fish.

The writer of "Science Notes" in the *Daily Chronicle* has a most interesting paragraph on the way in which the Japnese produce their extraordinary breeds of double-headed and double-tailed fishes. He quotes Dr. Ryder's conclusion that these ingenious people shake or disturb in some way the eggs of the normal species of gold-fish, and so interfere with the natural development of the organism. In confirmation of this theory he adduces the fact that Professor Weber, by actual experiment with the ova of common pike, produces double monstrosities of this kind "when the recently fertilized eggs were violently shaken." It is not improbable that the artificially-produced peculiarity of the double-tail might be inherited and become fixed. "We know that even in the higher animals monstrosities are often inherited, though the higher we advance in development the less apt are monstrosities to appear. We often see a two-headed calf, but the Siamese twins are phenomenal."

Tolled her love—The wedding bells.

SUTURING THE TENDO-ACHILLIS IN THE CORRECTION OF DEFORMITIES OF THE FEET.*

H. AUGUSTUS WILSON, M. D.†

Experience has shown that in most of the deformities of the feet, that require operative procedures for their correction, the tendo-achillis demands section, and not infrequently the lengthening or shortening of that structure only is required.

It is clearly apparent that all remedial measures, to be ultimately and progressively efficient, must have for their object not alone removing the appearance of the deformity by lengthening or shortening of tendons, but it is equally essential that the resulting strength of the tendon must be equal to the demands to be placed upon it.

The tendo-achillis communicates to the heel the power required to enable the arch of the foot to maintain the weight of about three times as many pounds as it exerts pounds of force. The leverage of the foot, in walking, is that of the second order of levers, that is, where the weight is placed between the power and fulcrum, the power being applied to the posterior end of the os calcis, the fulcrum being the distal extremities of the metatarsal bones, while the weight is imposed upon the astragalus.

Careful measurements of over a hundred approximately normal feet have resulted in showing that the average comparative distance from the end of the os calcis to the center of the internal mallelous, and from that point to the end of the distal extremities of metatarsal bone of the big toe was as 1 to 3.

This adverse position of the weight in its relation to the power and fulcrum, necessiates the use of a greater power moving through a small distance, to lift weight equal to one-third of the power through a proportionally greater distance.

The powerful action of the gastrocnemius and soleus muscles would be less confusing if it could be disassociated from its attachment to the weight it is to lift. Let it therefore be assumed that the upper end or insertion of this muscle is made fast to some immovable body and then its action in lifting the whole body will be apparent. A force of one unit, applied to the power end of this lever, would raise a weight of three units, if the foot was reversed, that is if the tendo-achillis was attached to the tarso metatarsal joints. This is the most common application of the second order of levers because it enables a small number of pounds of force to move a larger number of pounds of weight in proportion to its distance from the power and its approximation to the fulcrum. The advantages of less power is, however, at the expense of the arc of movement of the power end of the lever. Economy of space even at the expenditure of increased power often becomes necessary in the arts and is well exemplified in the human foot.

This expenditure of power, equal to three times the weight to be moved, requires that the means of communicating the power should be equal to the maximum strain that might be required to sustain additional weights, and thus we perceive that the tendo-achillis is the most important and, at the same time, the strongest and broadest tendon in the body.

The great importance of the tendo-achillis in locomotion, as indicated by its breadth and strength as well as by its mechanical function, demands that its strength and general utility after operation should be increased rather than lessened, and that the correction of the external appearance of a deformity should be secondary to a full re-establishment of the mechanical functions of the part.

The subcutaneous operation for lengthening the tendo-achillis, while it has had a brilliant career in assisting in the correction of deformities of the feet that were previous to its adoption corrected in part only, did not always fully meet the requirements.

The gaps between the divided ends of the tendons were filled by ultimate fibrous union which yielded when there was full contractile power in the gastrocnemius and soleus muscles, and only failed to yield when those muscles were largely inactive from previous disuse.

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*Read before Pennsylvania State Medical Society, 1893.

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The disturbance of the repose essential to a perfectly solid union was clearly shown by a patient upon whom I spliced the tendo-achillis under the local anæsthesia of cocaine, the contractions of the muscles increased the separation of the ends, a full inch, and this constant or voluntary contraction must make the uniting band attenuated.

It is impossible to disassociate the shrunken, atrophied, and often, useless calf with the possibility of its being assisted in its retrograde, by the weakened condition of the tendo-achillis divided in the often hap-hazard subtutaneous method.

If there was, prior to divison of the tendon, an atrophy or enfeebled calf, analogy would indicate that favorable condition would promote its growth and development until a full or approximately full usefulness could be obtained.

That the new band of union uniting the tendon is capable of stretching has become will established in cases that have required open section at some subsequent time. Several illustrations of this have come under my notice, in one of which the originial separation of one inch had increased to two and one-fourth inches. The fibrous connecting band was extremely thin and so firmly bound to all the surrounding structures that a most careful dissection was required to lift it from its bed. It wasfound to be attenuated to suchan extent that it was found impossible to use it in the effort to shorten the tendon, and recourse was had to a method of splicing, by taking parts of the original tendon.

In a large number of relapse cases that have required subsequent division of the tendo-achillis, it has been found that it was practically impossible to find a tendon. The extensive amount of elongation so often seen after transverse fracture of the patella is still further evidence in the same direction.

The inaccuracy and, therefore, uncertainty of the results to be obtained by simple subcutaneous division of tendons made the reception of methods of accurately elongating and shortening tendons, by splicing, a boom that has been rapidly seized by progressive operators. Although asepsis prepared the way, surgeons were not ready to take the advanced step of suturing tendons until time had elapsed to prove the benefits to be derived from the simple section through an open wound.

I desire to here acknowlehge my personal indebtedness to Dr. W. W. Keen, of Philadelphia, from whom I first learned, on March 4th, 1891, of the practical application of accurately lengthening tendons. On the above date Dr. Keen read before the College of Physicians of Philadelphia, a paper entitled: "A New Method of Tenotomy, by which the Tendons are Lengthened to a Definite Extent, instead of the present Hap-Hazard Method."

The patient. with post hemiplegic contracture of the flexors of the fingers, was operated upon by Dr. Keen, on November 29th, 1890. The method of procedure was then described. "Each tendon was first split in the middle, one and a quarter inches, and then, at the two ends of this incision, section of the opposite halves of the tendon was made. The two cut ends were then slid past each other and sewed together for a distance of half an inch, making three quarters of an inch of lengthening." On December 19th, 20 days after the operation, it is recorded "She went home to-day. Her hand is in much better condition though she cannot yet flex the fingers to any extent. The tendons are not torn loose, in as much as extension faradization flexes the fingers."

Quite recently, March 25th, 1893, the *Centralbatt fur Chirurgie*, published an article by Dr. Trnka entitled "A Contribution to the Technique of Suturing Tendons" in which the author speaks of methods which he employed for the first time in 1887. Trnka utilizes a lateral section of the upper portion of the divided tendon which he turns down and stitches securely to the lower portion, or else he unites the divided ends by strands of catgut securely sutured to each of the divided ends of the tendon.

While the two methods of acurately operating upon tendons were devised for the purpose of elongation, that which is most frequently required, I was impressed with the applicability of the longitudinal splicing method to the shortening of tendons.

In the discussion which followed the reading of Dr. Keen's paper on March

4th, 1891, I spoke of its applicability to shortening tendons. On June 10th, 1891, I resorted to the method in a case of paralytic talipes calcaneus, and have since that had occasion to employ it four times, although there are no published records.

Other surgeons embrace the methods described and, in addition, those in which it was attempted to obtain the same result by recourse to subcutaneous methods. It is clearly apparent that the essential feature of the methods described is the suturing together of the splice so that the elongation or shortening should be of a definite amount. In the subcutaneous methods there has been no attempt as far as I known to suture tendons, and shortening cannot be accomplished subcutaneously.

LARGE CYST OF KIDNEY; NEPHR ECTOMY; RECOVERY.*

L. S. M'MURTRY, M. D.†

The extension of the field of abdominal and pelvic surgery, and the splendid results attained in recent years, have become so familiar to the profession that isolated cases have ceased to be of special interest. The following case, however, is somewhat unique, and illustrate so many important practical points that I deem it worthy of special report and discussion.

On June 26th I was asked by my friend, Dr. Henry E. Pelle, to see a patient with him in the west end of the city. The patient is thirty-two years of age and unmarried, and presented the following history and symptoms: About three years ago she noticed an enlargement of the abdomen toward the left side. It gave her no discomfort at first, but she observed that it steadily increased in size. During the past year it had grown rapidly, and had now assumed the proportions of a large abdominal tumor, giving her abdomen the general contour and appearance of a woman far advanced in utero-gestation, except the tumor was larger toward the left side. Her general health was excellent, except that she was losing flesh, and suffering more and more with pressure symptoms. During the past few months she had preceptibly emaciated, and was unable to eat a full meal on account of the discomfort following. Her activity was interfered with also, being unable to discharge her duties easily on account of the weight and pressure of the tumor. Physical examination of the abdomen disclosed the typical signs of a monocystic ovarian tumor. It occupied the general abdominal cavity as well as the pelvis, had pushed the uterus backward into Douglas' space, thinned the abdominal walls, and fluctuated distinctly upon percussion. All the symptoms were characteristic of a cyst. Abdominal dropsy was readily excluded. She had expressed her desire to Dr. Pelle for permanent relief, and he had made known to her the necessities for operative interference. She was at once placed upon preparatory treatment, and went to the infirmary to undergo the operation.

The operation was performed on July 3d, at 9 A. M. Besides assistants and nurses, Dr. Pelle and Dr. R. C. Chenault, of this city, were present. A free incision was made in the median line between umbilicus and pubes, as in ovariotomy. On dividing the parietal peritoneum I was puzzled by finding another movable layer of peritoneum covering the cyst. My first thought was that it might be an ovarian cyst which had grown in the leaflets of the broad ligament so as to present such a duplicate fold of the serous membrane, but passing my two fingers down in front of the cyst into the pelvis I found both ovaries in their proper position, and quite normal in every respect. This demonstrated that the tumor had its origin in the post-peritoneal space, and had carried the peritoneum in front of it in its development. Following the outline of the tumor with my hand, I soon traced its attachments to they left lumbar region and satisfied myself that I was dealing with a large cyst of the left kidney. Announcing this to the anæsthetist, Dr. J. W. Guest, he immediately substituted chloroform for ether, which he had been using up to this stage of the operation, and continued to use chloroform throughout the remainder of the operation. Cystic degeneration of the kidney usually presents a large number of small cysts clustered together, and hydro-nephrosis, which is the result of an obstructed ureter, is limited for the most part to the pelvis of the kidney with varying degrees of renal structures preserved. This cyst, however, presented the pearly hue of an ovarian cyst, and, as the specimen presented herewith shows, consists of the capsule converted into a large single cyst. The capsule was distended and rendered very thin. It was easily punctured with the trocar, and the contents emptied into the tub beneath the table. I presume that it contained about one gallon of clear serous fluid. After emptying the cyst I found quite a task presented in separating the sac from its attachments to the peritoneum of the left lumbar region, and in freeing it from the spleen, to which it was firmly attached, and which appeared as a cap to the tumor.

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* Read before the Clinical Society of Louisville, July, 1893.

† Professor of Gynecology in the Hospital College of Medicine, of Louisville.

In separating the spleen, although observing the utmost care, I injured the capsule of that organ and denuded a considerable surface upon its inferior border. This started a capillary hemorrhage, which persisted throughout the remainder of the operation and for three days afterward. After freeing the cyst in all directions, I tied the ureter and divided it. I then secured the renal vessels with a strong silk ligature, ligating them in two parts, and cut away the cyst. I then closed with fine silk sutures the opening in the posterior layer of the peritoneum, through which I had delivered and removed the diseased kidney. An examination of the kidney on the right side at this stage of the operation demonstrated that it was of normal consistency, but very appreciably enlarged, which I attribute to the additional work thrown upon it by the progressive crippled condition of the other kidney. After cleaning the abdomen thoroughly and securing all bleeding points, I found the denuded surface of the spleen still oozing, and that the sponge packing I had applied had done little to arrest it. The bleeding was not great and not active, but consisted of a steady oozing of bright blood.

In order to deal with the pedicle and secure thoroughly the renal vessels, I had made a transverse incision in the abdominal parietes at right angles to the median incision, and extended this into the left lumbar region. I now closed the abdomen by suturing carefully both incisions, being careful to adjust accurately the severed rectus muscle end to end, and having placed a glass drainage-tube through the lower angle of the median incision, with the point resting in Douglas' space, where all oozing fluid would naturally gravitate, the usual dressing was applied, and the patient put to bed in good condition. There was no sweating or other symptom of shock, the pulse being 104 and of good volume.

The convalescence has been exceptionally easy and uneventful. The secretion of urine was quite free, and indicative of excellent kidney function. This has continued without interruption throughout her convalescence, and as it is evident from the specimen that all secretory tissue had long been destroyed in the diseased kidney, its fellow had evidently assumed compensatory structural and functional activity. The drainage was quite free for the first twenty-four hours, the bright color of the blood showing that it came from the spleen. This gradually ceased, and the tube was removed on the fourth day. The pulse remained under 100, and the highest temperature recorded was 99.6° F. The large double incision united throughout by first intention, and the stitches were removed on the ninth day. As a precaution against hernia after such extensive incision of the abdominal walls, I have kept the patient upon her back, and will insist upon keeping her in bed for three weeks, by which time organization and consolidation of the incision will be complete. Her appetite is excellent, and all her digestive and eliminative functions seem to be carried on perfectly, which I interpret as an indication of good compensatory power on the part of the right kidney, and a guarantee of restoration to perfect health. This woman has naturally a strong constitution, has been accustomed to health-giving habits of frugality and industry, with temperate habits.

I herewith present for examination the sac of this large tumor which in its lower part still retains an outline of the form of the kidney. The fluid contained in this cyst was not urine, but a perfectly clear fluid, such as we find in a typical parovarian cyst. It was an illustrative case of general cystic degeneration of the kidney, the capsule of the kidney forming a strong cyst wall, just as obtains in large ovarian cysts.

The practical lessons to be deducted from this experience are:

1. That in the diagnosis of abdominal tumors a large experience and painstaking investigation can not determine infallibly the exact character or even typical illustrations of ovarian tumors. The greater frequency of ovarian cysts alone determines a presumptive diagnosis between ovarian cyst and renal cyst. The exploratory incision is at last the means of positive diagnosis.
2. In operations presumably for simple, uncomplicated ovarian tumors the safety of the patient demands that the operator be qualified and prepared to deal with unexpected complications, and to do any operation known in abdominal surgery.
3. The results of nephrectomy, as shown by recent work, place this class of tumors within the limit of safe surgical procedures.
4. In dealing with large renal growths, and where nephrectomy may of necessity follow nephrotomy, the lateral abdominal incision in the semi-lunar line is preferable to the lumbar incision.

IMPROVEMENT OF HEARING AFTER THE REMOVAL OF POLYPI AND GRANULATIONS FROM THE MIDDLE EAR. *

LOUIS J. LAUTENBACH, M.D., PH. D.†

Among the frequent conditions found in neglected suppurative otitis media are polypi and granulations. These are often looked upon as of very serious import, and as making the subjection of the inflammation more tedious and restorative of function well nigh impossible. In contradiction to this view I claim that restoration of function in these cases is more frequent as well as more thorough than in chronic suppurative cases of equal duration without granulations or polypi. I do not mean to say that this is invariably so, but that it is usually the case. In cases of chronic suppuration with these growths present, I feel more hopeful of stopping the discharge without an excision, of closing the perforation and especially improving the hearing. This conclusion has been reached as the result of some twelve years of special work and the examination and treatment of upward of fifteen thousand ear patients.

The explanation of this clinical fact is, perhaps, rather a difficult one. In long-continued suppurative cases without these growths we usually find a general sclerosis of the mucous tissues, the epithelium much changed in character and the membrane of the middle ear a scarred and cicatrized tissue binding down and distorting all the structures. In cases with polypi and granulation there is present a reparative process. As soon as the tissue become ulcerated, new tissue forms, sclerotic action here giving way to a proliferation. The cause of this difference may be the circulatory supply. In the sclerotic cases it is restored upon the removal of the growth. I have found that in such cases if the auditory nerve is intact, I have invariably improved or restored the hearing.

In a case treated in 1884, upon the removal of a polyp by the snare, the hearing was immediately improved, and within two weeks was normal. The same case was seen in February of this year, and was normal at that time.

In 1883, I treated G. S., Bristol, Penna., burned out a mass of granulations, and after six month's treatment he had perfect hearing, although there was a very large performation of the membrana tympani. His hearing in December, 1892, was still perfect.

March 3, 1893, examined Miss M. H., age 24. Both ears had been suppurating

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* Read before Pennsylvania State Medical Society, 1893.

†Surgeon to the Pennsylvania Eye and Ear Dispensary; Chief of the Eye Clinic, German Hospital of Philadelphia.

for twenty-two years, occasioned by scarlet fever. Conversation heard with difficulty. Watch, right ear, 3½ inches; left ear, not on contact. Perforations posterior to handle of malleus occupied by granulations in both ears. Granulations removed. Hearing distance, April 28, watch, right ear, 12 inches; left ear, 5 inches. Conversation heard without effort. She considers her hearing perfect.

At present, I have under charge, Mr. F. H., age 21, Wayne, Pa., a case of entire destruction of the membrane, with breaking down of the mastoid cells, the result of an acute scarlatinous otitis of 15 years duration. The mastoid sinus was large, about 1¼ inches long. Occupying the middle ear cavity was a polyp, filling it entirely and interfering with the circulation to such an extent as to entirely occlude the meatus. Yet, despite these conditions, he is commencing to hear the watch a few inches from the ear and can hear ordinary conversation with effort.

These are but four, taken from some hundreds of cases, in all of which, when the treatment has been persisted in, the result has always been the same—either restoration or marked improvement of hearing.

CLINICAL REPORT OF A CASE OF HEPATIC ABSCESS. *

A. J. BLOCH, M. D., New Orleans, La. †

I was called on the 30th of March last to see a gentleman, sent from the country by his physicians to see whether surgical treatment could not be of benefit to him. Mr. B. was a native of Louisiana; his family history was free from tuberculosis or syphilis. Prior to January, 1892, he enjoyed excellent health, at which time he was first confined to his bed by fever and pain in the right side. After prolonged medical treatment he experienced no relief, and came five months subsequently to New Orleans. This proving of slight benefit to him he returned home, and again came to New Orleans, this latter time five months ago. Being discouraged, having experienced no benefit, he determined to return home and die. Whilst on the train, he was suddenly taken with most violent pains in the affected side, and in another moment he coughed up what he supposed to be a quantity of blood, but which subsequently proved to be liver pus.

The diagnosis of his trouble was quite evident now; his general condition being so much below par, his physician at home placed him on cod liver oil, quinine and a cough mixture. They did not attempt a free incision to remove the septic material, not knowing exactly where to locate the pus cavity. Thus his condition remained, constantly coughing up pus continuous septic fever and great progressive emaciation.

Upon taking charge of his case, I immediately explored and located a pus cavity in the right lobe of the liver. I could not make out any definite destruction of lung tissue. There was an abundance of rales; these, however, might have been due to accumulated pus in the bronchial tubes. Dullness was well marked at the lower lobe of the right lung. It was quite evident to me that a chronic pneumonia must have supervened from a constant irritation of the septic material coughed up. The day following my first examination, I had him sent to the New Orleans Sanitarium, and, on April 1, under chloroform, I resected the rib and made a large opening into the abscess cavity, removing fully one pint of very foul pus.

Fearing to irrigate under chloroform, as the cavity communicated with the lung and the water might clog up the latter and produce death from asphyxia, I packed the cavity with iodoform gauze and had the patient removed to bed. The patient rallied well; his pulse, as before the operation, was 155 a minute; his respiration 40. The following day I irrigated with a

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*Read before Orleans Parish Medical Society, April, 1893.

†Visiting Physician to Charity Hospital; Clinical Assistant to the Chair of Physical Diagnosis and Practice of Medicine, New Orleans Polyclinic; Assistant Instructor in Physical Diagnosis, Tulane Medical College.

2 per cent. solution of carbolic acid and substituted a drainage tube for the gauze. The change in his condition the next week was phenomenal; his temperature became normal; his pulse was reduced to 110, stronger and fuller; his appetite was inordinate, eating or asking to be fed whenever awake; his respirations from 24 to 28 a minute. He had been taking a tonic of iron and quinine, and when constipated a little sulphate of magnesia was given. Each day I irrigated the cavity with the carbolized solution, after which I injected peroxide of hydrogen, followed by iodoform and glycerine (4 drachms to 6 ounces). On April 15 I went to pay my daily visit. I found my patient in a very gratifying state; he complained a little of hiccough, but so confident did I feel in a future recovery that I promised to let him sit up in ten days. He was prepared to be dressed by the nurse in attendance, the patient assisting himself in the preparation. As soon as I introduced the nozzle of the syringe into the wound he began to cough; this was nothing unusual, as I experienced the same difficulty every day. I stopped for a moment, which gave him relief, and began again very gently to remove the pus. This time the cough became violent; my patient became cyanotic; I immediately grasped his pulse; it could not be felt; I tried every means possible to revive him, with no result; he was dead. I was unable to hold an autopsy and can account for his death to shock only, produced by a rupture of liver attachments, with flow of pus and water into the abdominal cavities, superinduced by the cough.

The points of interest in this case must be very apparent. Death might have ensued from several factors; firstly, from asphyxia or drowning the patient by irrigation; secondly, from shock resulting from a rupture of adhesions between the liver, abdominal wall and diaphragm. Another cardinal point is the danger of delay in making an early incision, to prevent a communication with the bronchial tube. Once this communication is formed the graver does the condition of our patient become. The constant passage of septic material through a lung, no matter how healthy, must leave destruction in its wake, and should we succeed in affecting a cure of the primary and graver trouble, we leave a suitable nidus for the propagation of the tubercule bacillus. I feel confident that my patient suffered from some such trouble.

The conclusion I draw from this case is: All suspected cases of liver abscesses should be explored early; a negative result will not increase the danger of the patient, a positive one will surely be of inestimable benefit. If pus is located an early incision should be made and the cavity thoroughly evacuated. If a communication has already formed with the bronchial tube irrigation should never be practiced, but in its place the cavity should be constantly packed with iodoform gauze. The latter will absorb the pus and disinfect the cavity and the patient will be spared the danger from which my patient died.

SOCIETY REPORTS.

THE CLINICAL SOCIETY OF LOUISVILLE.

Stated Meeting, July 11th, 1893.

Dr. L. S. McMurtry reported a

LARGE CYST OF KIDNEY; NEPHRECTOMY; RECOVERY.

(See page 368).

DISCUSSION.

Dr. W. L. Rodman; I take the position Dr. McMurtry does in these cases, that we cannot absolutely dispense with drainage in abdominal work. While in some instances it may be discarded, still a case of this kind emphasizes the necessity for it. I think the Doctor is to be congratulated upon the good result.

Dr. J. A. Ouchterlony: The case reported is remarkably interesting in many ways. I have seen a number of cases of cystic degeneration of the kidney, and yet I have never seen one having the least resemblance to this. First of all in cystic degeneration of the kidney there are usually several cysts. The largest cyst I ever saw was a case reported by myself several years ago, it contained about a teacupful of fluid. All of the cysts had thin walls; they usually have extremely thin walls. Here is one single cyst with a thick wall and has the ureter entirely obstructed. No communication between the ureter and the cavity. It is difficult to picture to one's self exactly how this case began as there are no remains of the usual cystic formation.

Another interesting point about the case is that the disease was entirely limited to one side which is not the rule. In all cases of cystic degeneration of the kidney that I have hitherto seen, the disease was bi-lateral.

MILIA.

Dr. T. P. Satterwhite: I want to ask Dr. Bloom a question in regard to a form of growth that occurs particularly upon the eyelids, if he is familiar with the little growths called milium. The reason I ask the question is that I have a case in a child about nine years of age. For some time past he has had what I thought to be ordinary warts on both hands; they were very numerous, and he formed the habit of biting them off. Now, the mucous membrane of the mouth, particularly of the lower lip, is studded with these milium. My understanding has always been that milium were inoculable. However, in this case the growths seem to have communicated from the hands to the mucous membrane of the mouth. I would like to ask what Dr. Bloom's experience has been in this connection.

Dr. I. N. Bloom: Milia are very common and when opened are found to contain a small amount of cheesy matter and epithelium. No case of contagious milium was ever known.

CANCER OF RECTUM—EXCISION—RECOVERY.

Dr. J. M. Mathews: A gentleman was referred to me several months ago from Lexington, Ky., by our friend Dr. Skillman, for some rectal trouble. In giving the history he stated that there had been injected some preparation supposed to be carbolic acid, into some supposed tumors of the rectum; that they had sloughed off, giving him a great deal of pain, and in that particular he was slightly better but that in others he was worse. In making examination I was pretty well satisffed that he suffered from some malignant growth of the rectum, and I so wrote the Doctor. The patient returned home and five days ago came to the city for the purpose of being operated upon. I made a further examination and found a circumscribed growth taking in perhaps three to three and one-half inches of the lower rectum. That it was malignant I had no doubt, so I decided to operate. In saying that I decided to operate I mean that I decided to extirpate the growth, for I believe for many reasons this is far preferable to the operation which is being done most extensively by other operators for similar conditions; that is colotomy. I could easily circumscribe the growth, therefore believed that I could remove the whole mass. I submitted the proposition to him, stating at the time that the great fear would be that he might suffer from incontinence of feces, although in some other cases that I have on record, the contraction of the cicatrices has been sufficient to control the actions to a remarkable degree, at least. He accepted the proposition to operate, and, under anæsthesia I did the operation. It is not necessary to enter into details except to say that in this case I removed the coccyx to give me better room to operate by making a careful dissection, tying off the vessels as they were cut and pulling down the rectum with the growth, I cut it off. I did in this case as I have in others, and have several times been criticised for it, but the more I do it the more I am satisfied that I am pursuing the right plan; that is, I did not attempt to bring down the mucous membrane of the gut proper and stitch it to the true skin. I leave it expecting the wound to heal by granulation. My object is just this, to get cicatricial tissue, in order that the patient may control his evacuations. I watch the whole process carefully and see that there is no healing of the granulations to each other by apposition; in other words I keep different sized tubes in the rectum or anus until the wound is entirely healed.

I believe this man has a good chance of ultimate recovery from cancer. Of course the glands were a little involved, being slightly enlarged in the inguinal region, but I believe these glands can be enlarged by inflammatory processes without being infected with cancerous material. At least this has been my experience in the past. I have often seen them so enlarged and so inflamed, and disappear after the operation.

This patient is only thirty years of age, has been a very healthy man up to a year ago when the symptoms were noticed, having no cachexia at all or other pronounced constitutional symptoms. I believe his chances of recovery are about the same as in the removal of the malignant breast of a woman; he suffered no further inflammation in the inguinal glands than perhaps would occur in the axillary space in malignant growth of the mammary gland in the female. This is the fifth day after the operation, and he has never suffered any pain—in three hours after the operation he complained a little but none since. I allowed his bowels to move to-day.

I speak of the case not that there is any unique feature in it, but principally to emphasize the belief that where extirpation can be done in malignant growths of the rectum, it is far preferable to the disgusting operation of colotomy.

DISCUSSION.

DR. W. O. GREEN, (visiting): I think Dr. Mathews pursued the proper course in this case. Cripps, Allingham, Treves and the majority of English surgeons state, I believe, that all cases should be operated upon where there is a fair chance of completely removing the diseased structures, and where the cancer is freely movable in all directions: Cripps points out in these cases that the most favorable ones are those in which the disease is limited to one side of the gut, resembles an ulcer, where the upper border is well marked, and healthy mucous membrane can be felt beyond the growth.

It is possible, where the disease is situated three inches up, to remove the malignant growth without interfering with the peritoneum and I believe this is the proper procedure under the circumstances. It is very important in removing cancerous growths from the rectum to know whether or not the peritoneum is opened. If it is, the chances of septic infection and subsequent peritonitis are greatly increased.

In regard to the prognosis: In the practice of American, English and Continental surgeons the direct mortality in excision of the rectum for cancerous growths is given at about 19 to 20 per cent. while the number of resultant cures of four years duration, have been shown not to exceed, at best, 11 per cent.

Concerning the cases that are suitable for operation: I think about fifteen to twenty per cent. of all cases of carcinomata of the rectum can be operated upon by excision.

Dr. Mathews spoke of not stitching the mucous membrane to the anus: I think he is quite right. In operations of this character the bowel can be stitched to the skin even where the gut has been removed some distance up, but the risks of peritonitis and cellulitis are far greater than otherwise. It is not likely that healing by first intention will take place on account of the great tension, much bruised tissues and number of ligatures required in closing the arteries. Healing by granulation suggests itself therefore as the proper course. In removing growths high up in the rectal pouch or there is an attempt to preserve the functions of the anus, a circular suture of the two ends of bowel is often practiced. Leakage has been shown to occur in fully half these cases. This, of course, establishes an artifical anus, which does away with the use of the natural anus and the dangers of septic infection are, consequently, much increased. I believe that, bearing in mind this liability of infection, when a circular incision is practiced a preliminary colotomy should be performed.

Bacteria in the Soil at Different Depths.

Some investigations carried out by Dr. Alexander A. Houston, of Edinburgh, respecting the number of bacteria in the soil at different depths from the surface, go to prove that the micro-organisms become less and less abundant as the depth from the surface increases. For example, the average number of germs in a gram of soil examined, which was taken from the surface, was 1,687,799; at a depth of three feet this average fell to 173,807; and at a depth of six feet it was anly 410. These figures are interesting, and would tend to show that at certain definite distances from the surface the soil would be sterile.

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SATURDAY, SEPTEMBER 2ND, 1893.

EDITORIAL.

THE PRESIDENT'S HEALTH.

It seems a confirmed weakness of the secular press in dealing with the affairs of men prominent in public life, to announce them more or less incapacitated by illness —the habit of political opponents; or else suffering from an excess of good health— the habit of political supporters. So general is this custom of exaggeration that the public put little faith in reports on this subject. There is always a disposition on the part of friends to deny all rumors of sickness. This was notably so when Garfield was dying; also when Sheridan and Blaine were upon their death beds. The more prominent the man, the more he suffers—from press reports, so that when actually sick or threatened by impending death, the true knowledge of the matter comes like a shock to the public.

That it is fortunate the public is not generally aware of the truth is well illustrated in the present case of President Cleveland. The existing financial stringency, the confusion and uncertainty concerning the commercial interests of the country and other questions of vital importance to the nation, have brought about a condition of affairs that alarm for the chief magistrate's health would make "confusion worse confounded."

Sensational reports of President Cleveland's physical condition, together with some actions apparently inexplicable, have of late filled the secular press. The reports of ill health have been regarded in the same light as the reports of cowardice in meeting political emergencies. But it now seems that there was some foundation for the former reports, as it is asserted on what appears to be good authority, that not only was the President's health impaired seriously, but that he has submitted to an operation for immediate relief, and in hope of the ultimate cure of a serious condition.

It is stated that Mr. Cleveland has been suffering for some time from a morbid growth "in the bones of the left upper jaw and nose," the nature of which could only be determined by microscopical examination; the inference being that the growth was malignant. The diseased portion of the bone was thoroughly removed without an external incision and the immediate recovery was complete. The operation was performed under nitrous oxide anæsthesia, while the President was on board of a friend's yacht on the first day of July last. None but the most intimate friends of the President were cognizant of his condition or of the performance of the operation at the time.

President Cleveland's wonderful self-control and endurance, and his intense devotion to the duties of his position have excited the admiration and respect of all, even his political opponents. The hope that the growth will prove benign, or if not, that the operation was entirely radical, will be universal. Doubtless the profession will soon be aware of the actual nature of the disease.

TRANSLATIONS.

INTRA-UTERINE INJECTIONS IN PUERPERAL INFECTION.

Ouimet (*L' Union Med. du. Canada* April, 1893) states that in 1750 intra-uterine injections were first introduced into France in the treatment of puerperal complications. In 1853, Eisenmenger in Germany, made injections of charcoal water in a case of putrid infection. As to the *mode of action of intra-uterine injections*, it is recognized to-day that puerperal infection is a septicemia due to the absorption of pus formed in the uterine cavity. When delivery has been complete there is nothing but the uterine mucosa to suppurate, but in the contrary case, there is added to this the putrefaction of the debris of the ovum or of a clot retained in the uterine cavity. Consequently, to cure the puerperal infection it is necessary to meet two indications: to prevent the absorption of pus by removing it, and to arrest suppuration. Intra-uterine injections have this double power, and they also have a mechanical and a therapeutic action. The mechanical action consists in the removal of the contents of the uterine cavity, and M.M. Budin and Auvard have demonstrated the truth of the statement that intra-uterine injections bathe thoroughly the entire uterine cavity. The injection by removing from the uterine cavity the putrefying substances causes rapidly an amelioration in the general state and a fall of the fever. This rapid effect has been observed by all investigators but it has only been since the introduction of antisepsis that we may observe actual cases of cure or very rapid amelioration. By removing the septic products the injections suppress the cause of general infection of the organism, because the absorption of pus ceases. If the infection is quite superficial and the disinfection complete by the first injection, there is no reproduction of pus, the fever falls and a cure is produced. The antiseptic agents act upon the surface and not in the depth of the tumor, so that when the infection is deeper the injections have a slighter action, and it is necessary to make two, three, or even ten or eleven injections in order to make a cure. In truth the antiseptic agent has disinfected the surface but the septic products contained in the deeper layers are eliminated, and it is necessary to repeat the injection to remove them. The antiseptic agent acts in an analogous manner upon foreign bodies, membrane, clots or placental debris, which the uterus nearly always contains in cases of infection. Under the influence of antiseptic injections their putrefaction is arrested more or less rapidly, and they are eliminated as detritus without suppuration. During this local action the general state ameliorates progressively, because by hindering the absorption of new septic products, the injections permit the organism to eliminate the products already observed without undergoing a new weakening from the absorption of a new quantity of septic products. In order that the antiseptic action be efficacious it is necessary that the injected fluid remain a certain time in contact with the mucosa. To meet this condition it is necessary to pass a very large quantity of

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† Translated for The Medical and Surgical Reporter by W. A. N. Dorland, M. D.

fluid into the uterine cavity, four to six liters at each injection.

Therapeutic Indications.—It is evident that the action of intra-uterine injections is most prompt if the infection is superficial. It is therefore proper to begin the treatment early. An injection should be made each time that there is an elevation of temperature that cannot be manifestly attributable to a cause foreign to the uterus. If an examination of the placenta shows that there remain portions in the uterine cavity, or if there be a peculiar offensive odor of the lochia, there are indications that the uterus is infected and that injections are required. In a slight case, when the temperature does not exceed 38° C, it will suffice to make one injection daily. If the temperature be more elevated, two or three injections should be made daily, especially if the infection is produced by the putrefaction of a foreign body. During the past ten years very many antiseptic substances have been employed in obstetrics; salicylic acid, thymol, boric acid, permanganate of potash, are those that are most serviceable for intra-uterine injection. Since the introduction of the bichloride of mercury by Professor Tarnier, this agent is nearly universally employed for intra-uterine injections. It is necessary to employ a 1 to 4000 or 5000 solution. Albuminura, by hindering the rapid elimination of the poison in case a certain portion be absorbed, is a formal contra-indication to its employment. In this case carbolic acid,2 to 100, should be employed. The injecting fluid should have a temperature of from 30° to 35° C. At each injection it is necessary to use at least 4 to 5 liters of the fluid. The injection of the sublimate should always be followed by the injection of one or two liters of boiled water to prevent absorption of the fluid that remains in the uterus and vagina, an absorption facilitated by the wounds in these organs.

Accidents.—Intra-uterine injections, while constituting a powerful means in the hands of the physician of combatting puerperal infection, are not absolutely without danger. Some of the objections offered to their use are theoretical, others are real:

1. *Passage of the liquid through the tubes.* This objection is purely theoretical; experimentation has always demonstrated its falsehood and clinical observation has never proved it. On the contrary, experiments on cadavers, and clinical observation prove that this danger does not exist, and it becomes necessary to consider as strongly hypothetical the possibility of the passage of an injected fluid through the tubes into the peritoneal cavity.

2. *Entrance of air into the uterine sinuses and thence into the circulation.* This is also an entirely theoretical objection. Nevertheless, to prevent this danger, it is proper not to introduce the sound into the uterus until it is completely deprived by air.

3. *The production of hemorrhage.* To prevent this accident it is necessary to avoid much pressure, and to provide oneself with a perfectly sound and smooth instrument.

4. In some cases are observed acute and transient symptoms, consisting in chills, renal pains, acceleration of the pulse, cyanosis, syncope, convulsive movements. These may be attributed to fear, impressionability, hysteria, sudden distension of the uterus, too low temperature of the fluid.

5. *Perforation of the uterus.* In the introduction of the sound it is not necessary to employ force. It should glide in of itself. Perforation may result from an obstacle to the free passage of the sound; from undue softness of the uterine tissue, or from a bad direction or undue force applied to the sound to overcome an obstacle. This is a very grave accident, and probably the only one to fear. To avoid it violence should never be employed, and should the sound meet with an obstruction, it is always well to ascertain its nature before executing a manœuvre to overcome it.

Conclusions. 1. Intra-uterine injections constitute a rational and efficacious treatment in puerperal infection.

2. They should be made with a sound which assures the easy flow of the liquid and a complete lavage of the uterine cavity.

3. The sound of M. Baudin fills these condition; also that of M. Doleris.

4. If the sound meets with an obstacle in its passage it is necessary always to ascertain its nature and never to employ force to free it, because the softness of the uterine tissues renders possible its perforation.

.5 The injections are made with a solution of bichloride of mercury 1 to 5000; in case of contra-indication, with carbolized water 2 to 100.

ABSTRACTS.

CHOLERA: ITS PREVENTION AND TREATMENT.

Dr. Elmer Lee, of Chicago, says:

The leading propositions suggested and tried in the treatment of Asiatic cholera during the epidemic of 1892 in Europe, consisted of the following general plans. Early in the epidemic, lactic acid treatment was proposed on the ground that it would neutralize the alkaline accumulations in the bowels and so stop the multiplication of the bacilli.

The use of large doses of salol grew in favor as a new remedy during the epidemic. The average result of cases so treated could not be said to be satisfactory.

Calomel was everywhere a remedy even more used than salol. Formerly this drug was used in very large doses, but last year it was the very small doses which found favor. Especially was this true in the treatment of cholera in Hamburg.

Of the surgical measures, the infusion of solutions of salt were most practiced. The solution consisted of distilled water in which was dissolved one-half of one per cent. of common salt. This liquid was warmed to the temperature of the blood and either introduced directly into some large vein or injected with a long needle and a large barrel syringe beneath the integument of the abdomen. The amount of salt solution used in either case would be from one pint to one quart each time. In one case treated at Hamburg as much as thirteen quarts of salt-water were used from first to last. The patient recovered. The subcutaneous injections were frequently followed by cysts and sometimes abscesses appeared. Intravenous injections sometimes proved a godsend, but more frequently disappointment could be said to be the result. These injections were only used in the third period of the disease or the stage of collapse, algidity or asphyxiation, at which period, it would be rather unreasonable to expect recovery by virtue of any treatment.

The Italian treatment was much used and with frequent gratifying success. It consists of a clyster composed of the following constituents:

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	Boiled water or infusion of chamomile, (warm)	2 litres.
	Tannin	5 to 10 grams.
	Laudanum	30 to 50 drops.
	Powdered gum-arabic	50 grams.

This or some part of the solution is occasionally passed into the rectum, to be retained if possible by the patient. In the experience of those who have followed this method of treatment almost every case taken at the beginning of the disease has lived. It is certainly more reasonable in principle than simple medical management.

Of the experiments of Ferran, of Spain, and Haffkine of the Pasteur Institute, much has been said, but what has been said has failed to bring conviction to my mind. As cholera itself cannot be said to protect one who has had the disease, and recovered, against a second attack, then that which is less than cholera in influence cannot be expected to do it. The seat of the disease is located in the intestines, and, so long as the infectious juices are there, the lymph vessels in the processes of physiological function will continue to infect the blood. Can we hope to thwart physiological action of absorbents by hypodermic injection of cholera culture, made at some time, it may be years previous to the date of the passing epidemic? The answer by my judgment, is that such expectations are flimsy.

It is now well known that cholera is a disease of the alimentary canal. Its inciting cause is believed to be a germ taken into that canal through the medium of food and drink. There its presence is protested against by the absorbent vessels, which eliminate from the food the nutriment for the body. The first symptom produced by foreign invasion in the intestines is a diarrhœa, which may precede vomiting from one to three or even four days. If this be true, the bowels must be the seat of disorder, and the most direct method of reaching them by medication must be the best. If the stomach could be emptied of the foul material before the poison has passed further, there might be speedy relief and, indeed, no real cholera. After it has passed into the intestines, medicine administered through the stomach may be slow in reaching the seat of the disease, and even then can only mingle with the poison, holding out the hope that the one will be neutralized by the other. This hope, in truth, is seldom realized. But if the poison can be removed from below, the course is left clear for nature to recuperate itself. The diarrhœa is an evidence of the great exertion put forth by the organism to rid itself of the death-dealing agency, and probably it would be effectual in the great majority of cases were it not that the nervous forces of the system are exhausted by the terrible strain before the required evacuation of the bowels is completed. A large irrigation of hot water, made soapy preferably by neutral liquid soap, introduced into the colon through a suitable rubber tube, is the simplest, and I am prepared to say further that it is a more satisfactory way of treating cholera than any other with which I am acquainted. The time to begin the irrigation is at the very earliest possible moment. The rule from which there need never be deviation is to treat the patient by irrigation of the bowels and rinsing of the stomach, without waiting for confirmation of the diagnosis either with the microscope or by the culture test. The best part of the practice is always to save the patient, even at the expense of fine statistics.

For internal treatment my experience taught me that the *peroxide of hydrogen*, given in cupful doses of the strength of 4 per cent., or even much stronger was a better antiseptic than any other drug heretofore known in the treatment of cholera. Then the treatment would be, first, immediate irrigations with hot water and soap, using from one to three gallons at a time twice a day for the first and second day. Once a day afterwards if required, which is seldom the case. At the same time cleanse the stomach with *peroxide of hydrogen* and hot water used freely—by urging the patient to drink. The feeding and nursing are the same as would be required by a patient suffering from septicæmia or other prostrating disease.

Cleanse the bowels, wash the stomach, feed the sick, keep them warm if cold, and reduce excessive heat by the cool bath rather than reliance upon drugs; using anything in an emergency that is the easiest and the most accessible to procure. The cholera patient may be convalescent inside of the first few days, or if not convalescent and not dead, the case goes into the typhoid state, after which convalescence may be deferred for several weeks or death may be the conclusion. The temperature prior to the fifth day is generally subnormal or a little above, but on the fifth day marked exacerbation and elevation of temperature indicates the typhoid condition.—*Chicago Clin. Rev.*

PHARMACOLOGY IN EUROPE.

Piperazin is steadily gaining ground in the estimation of European physicians, and is regarded as *the* remedy in all forms of uric acid diathesis in continually widening circles. Dr. H. Wittzack brings the latest contribution to the literature of the subject, and his experiences are equally favorable as those of Bisenthal and others who have fairly tried the remedy in practice. From observations in five cases of gravel and in one case of arthritis urica deformans, he draws the conclusions, that (1) diuresis is considerably increased, in the case of arthritis, the amount passed in the twenty-four hours being more than doubled; (2) the specific gravity and acid reaction of the urine is lowered, but never becomes alkaline or even neutral; (3) the appetite is not affected and no disturbance of the general condition can be attributed to the administration of piperazin; (4) that there is no difference in the action of free base piperazin and its hydrochloric acid salt, but in practice the salt is preferable because it is less hygroscopic. The author further emphasizes the necessity of administering piperazin continuously for some days (15 grains daily for a fortnight) before forming an opinion as to its efficacy, and at the same time describes subcutaneous injections of piperazin as both painful and dangerous, causing infiltration and a tendency to form an abscess.

The main outcome of Wittzack's experiments is that he conscientiously recommends piperazin in all cases of uric acid diathesis and regards it as a specific remedy. A similar favorable opinion is held by Dr. John Gordon, who at the request of the Scientific Grants Committee of the British Medical Association undertook to test the power of solution possessed by piperazin on uric acid and uric acid calculi, and its therapeutic value in cases of gout or in uric acid diathesis. In his preliminary report on the first points in the research, he says, that there is distinct evidence of its solvent power both of calculi and uric acid. As yet clinical cases have not been obtained in sufficient numbers to allow him to draw conclusions as to its therapeutic action.

Piperazin is, however, still too new a remedy to escape objections against its employment, which mainly depend upon incomplete acquaintance with the characters of the base. Thus Dr. Roerig a short time ago reported a most unpleasant bye-effect of piperazin, which, if true, might well have raised grave doubts as to the advisability of its administration. He observed that after administration of piperazin to two persons suffering from uric acid diathesis the urine gave a copious precipitate with picric acid, and he at once rushed to the conclusion that albuminuria was induced by the action of the piperazin upon probably unsound kidneys. This result, however, was in distinct contradiction to the observations of earlier investigators who had administered as much as 90 grains piperazin *pro die* without finding albumen in the urine. The fallacy was, at once, evident when Biesenthal pointed out that even with 1 part piperazin in 20,000 parts water picric acid produces a distinct precipitate, so that considering the large proportion of the base that passes through the organism undecomposed there is no wonder that a precipitate is formed by this reagent in the urine after administration of 15 or 30 grains piperazin. The correctness of this opinion has been practically demonstrated and the nature of the precipitate more nearly investigated. Employing picric acid as reagent the distinction between albumen and piperazin is best shown by the disappearance of the crystalline precipitate of piperazin picrate on warming, whilst the albumen compound is insoluble both in hot and cold water. In the light of this knowledge Dr. Roerig's observations lose their startling character.

Instead of the employment of piperazin being limited it appears rather to be extending to new fields of usefulness. Dr. Hildebrant found that piperazin possesses the property of completely overcoming the elimination of sugar from dogs poisoned with phloridzin. By simultaneous administration of phloridzin and piperazin the usual diabetic symptoms did not appear, and the general condition of the animals remained good, the hydrochloric salicylic and phosphoric acids being equally active. The application of this treatment to a severe case of diabetes, by the administration of 15 to 25 grains piperazin *pro die,* given in 3 doses in aqueous solution, and persisted in for 14 days, reduced the sugar percentage from 7 or 8 to 3.3 per cent., whilst the general condition and nourishment of the patient was improved.

As the results of an investigation by Dr. Sittmann of the value of papain in stomach affections, the author found that it developed its digestive action alike in neutral, alkaline and acid solution, and in cases of absence or pathological change of the digestive juices reduced the albumen to an assimilable condition. He administered 5 to 8 grains papain (1½ grains sufficed to digest 150 grains coagulated egg albumen in 4 ounces of water in 2 hours), mixed with a little water, immediately after every meal of flesh. In acute catarrh of the stomach the improvement was noticeable after 2 or 3 doses, the pain disappeared, appetite increased, and in 2 or 3 days a complete recovery was affected, more than 6 doses never being required. In chronic catarrh the course of treatment required to be prolonged for a fort-night; in three cases of chronic dyspepsia, originating in ulcus ventriculi, the appetite was restored in a week. Even in 2 cases of carcinoma ventriculi, that ultimately underwent a post-mortem examination, the use of papain considerably diminished the pain after meals. It was also successful in neurosis of the stomach, and in hysterical and neurasthenical cases. It is evident, therefore, that papain is a valuable agent in maintaining the general assimilative conditions for a time in all cases where there is, from any cause, failure of the digestive juices of the stomach.

The fact that papain has the power of digesting and thereby destroying dead and diseased animal matter, whilst it is inactive towards healthy living tissue is also not sufficiently appreciated by surgeons. Although papayotin was originally introduced by Rossbach for the local antiseptic treatment of diptheritic membranes, it has now been replaced by the cheaper and more active papain. Yet even this has fallen somewhat into disuse, and there is no doubt that the reason consists in its having been used too sparingly. As it is non-poisonous it can be applied freely without danger. In a recent contribution by Dr. H. A. Francis on the uses of papain as a "selective caustic" he relates that in his experience all traces of diphtheritic membrane disappear in a few hours in cases where the powder can be insufflated freely and frequently. In tuberculous ulceration he has also applied papain with success, and notably in lupus vulgaris In the latter case a saturated solution of papain in glycerin was given to be rubbed into the lupous patch night and morning. The papules gradually disappeared, the surface assumed a healthier appearance, and even became soft and flexible and only slightly discolored, the ulceration having completely healed.

It is astounding what conflicting reports appear as to the employment of pental as an anæsthetic, and although from time to time unpleasant and even fatal consequences are attributed to its use, as is the case with all anæsthetics, yet the fact that pental always finds a host of partisans, especially among dental surgeons, who maintain that they can employ it with comparative safety and without the disagreeable after-symptoms that accompany most anæsthetics, leads one to suppose that want of success is as much due to inexperienced manipulation or accidental circumstances as to any inherent defects in the compound. In a paper by a lady-doctor, Fraulein Kleindienst, a new development presents itself. Although the author concurs with Professor Hollander and others as to the action of pental on frogs and rabbits, and as to the happy results obtained in minor operations, having even administered it with success in anæsthesia lasting 48 minutes without any untoward symptoms, yet she condemns its use because she believes to have observed an injurious action on the kidneys, having detected in a few cases albumen and blood in the urine after pental narcosis. This evidence being so entirely new requires support before it can be accepted, especially as in two cases in which details are given, it appears that zinc chloride injections were made during the operation, and zinc chloride is known to injuriously effect the kidneys.

The direct consequence of this communication has been that Dr. Bauchwitz has made a special series of experiments to determine the truth of the appearance of abnormalities in the urine after pental narcosis. The results of his examination of the urine, both of rabbits and human beings, are completely negative, nor was he able to detect any organic changes in the kidneys of rabbits killed by overdoses of pental. In fact, in his experience in operations on the teeth and mouth, pental is at present the best anæsthetic we possess for short operations, in consideration of its reliability and general condition of the patient after the operation.

Calomel is a drug so well known that any reference to its use almost calls for an apology, but the experience of Dr. C. Chapman of the advantages of repeated small doses of calomel over the usual dosage is worthy of attention. Fractional doses appear indicated in cases of gastro-intestinal catarrh, whether following upon exposure to cold or from improper feeding, where the stomach is intolerant alike of medicine and of food; a similar plan has also been of great service in adults with protracted vomiting, where the more obvious causes for the sickness have been eliminated and the only additional symptoms have been an independent pain in the hepatic region and an abnormally red tongue. In two illustrative cases quoted by Dr. Chapman, one a child of four years, the other a woman 54 years old, the symptoms were due to catarrh of the upper part of the alimentary tract associated with some hepatic congestion. To the child the following powders were prescribed: Calomel, one grain; sugar of milk, eight grains;—to be divided into ten powders, one to be placed on the tongue every fifteen minutes. To the adult the calomel was given in doses of one-sixth of a grain every twenty minutes until two grains had been taken. The earlier beneficial effects of the calomel is probably to be attributed to the germicidal and antiseptic properties of the mercury, as the stomach speedily became more tolerant of food, and the breath lost the odor suggestive of fermentation, before the liver could have been acted upon by the drug, though improvement was more marked after the bowels had been acted upon. Gardiner has also exhibited calomel in a similar manner with gratifying results.

Most interesting is, however, the applicability of this mode of treatment in the later stages of heart disease, where long-standing valvular disease has by backward pressure caused the well-recognized visceral complications, amongst which may be noted congestion and catarrh of the alimentary tract consequent upon the chronically gorged state of the liver. It is obvious that 'digestion and and assimilation, being thus interfered with, not only does the general nutrition suffer, but the already enfeebled and dilated heart yields more and more. Dr. Chapman cites a case of heart failure in which, after all other medicines had failed, doses of one-sixth grain calomel every half hour, and nutrient enemata, restored the patient, apparently at the point of dissolution. Here relief of the portal congestion is probably the most important effect of the calomel; the right side of the heart, feeling first the lessening of the pressure, is able to do its work better; the hepatic cells resume to some extent their function; and the kidneys, sharing in the general relief of the tension, cause a decrease of the jaundice and lessoning of the œdema. The appetite returns in due course.

In hospital use chloralamid continues to elicit favorable expresssions of opinion in regard to its hypnotic qualities, especially in different forms of mental disturbances. Früs gives it in the form of an alcoholic mixture; Chloralamid 10 parts, alcohol 20 parts.syr. aurantii 30 parts, and water 100 parts: the dose for adults being as a rule one to two teaspoonfuls pro die. He has given it in 47 cases with satisfactory results, the action being prompt except in advanced cases of delirium tremens, in which it was without effect, as well as unreliable in the insomnia of males due to chronic alcoholism. Its administration is not attended with any injurious bye-effects upon the digestive organs, even after employment for months, and the heart's action is in no wise affected. The pulse and respiration, in the author's experience, remain quiet and regular under the hypnotic influence of the drug.

A novel employment for the new antiseptic, formalin, has been found by Dr. Hauser, of Erlangen, which indirectly demonstrates the extremely powerful and penetrating action of formic aldehyde and, paradoxical as it may seem, relates to the preservation of bacteria. It is evident that in the teaching of bacteriology demonstrations of pure cultures of bacteria in gelatine and as plate cultivations are invaluable and almost indispensable aids. Mary authors have tried in this way to prepare and preserve cultures on different media with only partial success. The vapor of formalin, which contains about 40 per cent. formic aldehyde, have a most extraordinary disinfecting power, so that not only the surface is attacked but the development is checked and the micro-organisms killed in the deepest layers. Not only so, but in gelatine cultures by the continuous action of the formalin vapors the gelatine liquefied by the bacteria is again solidified without losing its chara-acteristic appearance, so that in this manner Dr. Hauser has been able to preserve plates of cholera, anthrax, typhus, proteus, staphoylococcus, sarceria, and other bacteria, retaining both their microscopical and macroscopical characters unaltered. The method is very simple, the vessels containing the cultures being simply covered with a piece of filter paper moistened with 10 to 15 drops of formalin and placed in a moist closed chamber, in which is also placed a procelain dish containing cotton-wool saturated with the disinfectant. It is important that only fresh formalin should be employed for this purpose, and that it has not been exposed in badly closed bottles.—*Notes on New Remedies.*

Hæmaturia.

Bloody urine alternating with clear urine is almost a positive sign that the region of the trouble is in the kidney, as this condition of things never exists in disease of the bladder. If the last of the urine shows clear blood, or appears to be most bloody, it locates the trouble in the bladder, the contractions forcing out the blood. In a case where the urethra is free from disease, blood showing mostly at the beginning of micturition proves the trouble to be located at the neck of the bladder.—*Annals of Gynecology and Pœdiatry.*

Sodium Sulphate, in strong solution, introduced into the stomach through a tube, if the patient is unable to swallow is reported to be an efficacious antidote in cases of poisoning by carbolic acid.

THE LIBRARY TABLE.

BOOK REVIEWS.

Hospitals and Asylums of the World. **Their origin, history, construction, administration, management, and legislation; with plans of the chief medical institutions. By Henry C. Burdett. In four volumes and a portfolio. London: J. & A. Churchill. Vols. III and IV.**

These volumes conclude the most elaborate discussion of this subject that has ever been published. The author is especially well qualified for his work and has displayed remarkable energy and perseverence as well as rare judgment in treating his subject. He states in his preface that his work has cost him fourteen years of labor and a large sum of money and when the obstacles to be overcome are taken into consideration, his remark that it has been "a labor of love is entirely superfluous."

The first two volumes have already been noticed in the REPORTER. The third volume discusses the origin and history of hospitals, systems of hospital administration, revenue and expenditures, system of nursing, dispensaries and special forms of hospitals including military and naval. The discussion of the practical financial problems is elaborate and while referring more particularly to English institutions, is well worth study by all interested in the management of hospitals. It would be well if the conclusion he reaches as to the folly of narrow economy in hospital finance could be deeply impressed upon the managers of such institutions in this country as well as abroad. He notes that large hospital endowments are rarer in America than in Europe. Also that the income from pay patients is greater here than there. Elaborate tables give the average yearly expenditure per bed in various hospitals, and the great difference between hospitals in this respect is due to the peculiarities of individual institutions and the work done by them. In general, small hospitals expend more per head per annum than do large ones.

The chapter on the organization and management of nursing systems in connection with hospital work is excellent, though that part relating to the United States is too condensed. The discussion of the relation of hospitals and medical schools showing that the connection is of mutual benefit, is of great interest and importance. This relationship has never been sufficiently insisted upon in this country. We believe every hospital where charitable work is done should be a means of instruction and benefit easily accessible to medical students.

The fourth volume, together with a large portfolio of plans, is devoted to hospital construction and incidently to institutions intimately associated with hospital work. To expert hospital architects this part of the work is indispensible, and the information, while technical, can be easily understood by any intelligent person. The author insists that those charged with the responsibility of hospital construction should place the entire matter in the hands of an expert, thoroughly acquainted with the most recent. deoləʌpments in hospital needs and administration, and not in the hands of those inexperienced in this particular branch, however expert in others. Neglect to follow this advice will invariably prove its wisdom though the demonstration be costly.

The volume includes types of the best modern hospitals and of them all the highest praise is given the Johns Hopkin's Hospital in Baltimore, which the author says "is by far the most complete and perfect set of buildings which have ever been erected for hospital use." The section on hospitals for infectious and contagious diseases, with the plans for such buildings, will be a Goloconda of information for municipal authorities in America at this immediate time.

The work is well printed on good paper and neatly and strongly bound, and since the edition is limited to 500 copies, those interested in this subject should secure the work without unnecessary delay.

The Ready-Reference Handbook of Diseases of the Skin. **By George Thomas Jackson, M. D. With Fifty Illustrations. Philadelphia: Lea Brothers & Co. 1892.**

This volume is intended to present the art of dermatology as it now exists. No attempt has been made to discuss debatable questions. Hence, pathology and etiology do not receive as full consideration as symptomatology, diagnosis, and treatment.

The alphabetical arrangement of the different diseases has been adopted for convenience of ready reference. The descriptions of various diseases are clear, lucid and careful.

Attention is called to the fact that in the prescriptions given no attempt has been made to translate grains, drachms, and ounces into their precise equivalents in grammes, but simply to preserve the relative percentages of the ingredients in the old formulæ and express them in decimals. The decimals may be regarded as either grammes or parts.

The work is divided into two parts with an appendix. Part I. comprising some 28 pages, is devoted to the Anatomy and Physiology of the Skin, Diagnosis, Therapeutic Notes, and Some Dermatological Dont's. Part II. The Diseases of the Skin and their Treatment. In the present state of our knowledge it is impossible to make a satisfactory classification of skin diseases. Many attemps have been made to do this, and are still being made. Nearly every systematic writer tries his hand at it with more or less indifferent success. Hebra's classification, modified, is found in a great many text-books. The arrangement of this book does away with classification, with which the student need not burden his mind.

The Appendix contains 13 pages of formulæ, given as guides in the preparation of prescriptions for the treatment of skin diseases. Many, if not all of them, have been tried by the author and their value proved.

Dunglison's New Pronouncing Medical Dictionary.

A new edition of Dunglison's Medical Dictionary is announced as in press for early publication. It has been thoroughly revised and greatly enlarged, and will contain about forty-four thousand new medical words and phrases. Pronunciation has been introduced into the new edition by means of a simple phonetic spelling. This work has always been noted for the fullness of its definitions, ample explanation being its distinguishing characteristic. In the new edition much encyclopœdic information, difficult of access elsewhere, will be found conveniently at hand. Especial attention has been devoted to matters of practical value. A review will appear in an early issue.

A New Medical Dictionary. A completely new Medical Dictionary is announced for early publication by Lea Brothers & Co.

The author, Dr. Alexander Duane, of New York, is already widely known as the medical expert for Webster's International Dictionary. His new work has been drafted to supply medical students with all desired information concerning the words they will meet in their course of reading, and as the vocabulary has been selected most liberally, the work will be of value to practitioners also. The pronunciation of each word is given by a simple and obvious phonetic spelling; then follows the derivation, an unexcelled aid to memory, and finally a full definition. Descriptive matter has been appended to such words as cannot be adequately explained by simple definition. Thus diseases are described, and their symptoms and treatment are given; drugs are followed by their properties, effects, doses, etc. Extensive tables of bacteria, doses, etc., are placed in the alphabet most conveniently for reference. A work of real value is promised, and we shall take an early opportunity of reviewing it in these columns.

The Review of Reviews

Seems to hold the most intimate relations with almost everything and everybody in all parts of the world. Its illustrations and its bits of summary discussion put its readers into harmonious acquaintanceship with nearly all that is worth remembering in the events and the discussion of the proceding month.

In this period of depression when a good many older periodicals have been hard beset, it is interesting to learn that the *Review of Reviews*, although comparatively so young, has won a position as impregnable as any other periodical that could be named in the United States, and that its circulation is not only solidly maintained, but steadily increasing through the intrinsic merits of the periodical. The *Review* has become a necessity to a large constituency; and whereas in times of financial depression many people give up their luxuries, there is always a steady market for the plain necessaries. Fortunately for the *Review of Reviews*, its readers consider it as a prime requisite rather than a causal luxury, and so its editions are not curtailed by the influence of current financial disasters.

Sharp & Dohme's Price List for 1893.

Special mention is made of Webber-pepsin, Ergotole, Pan-Peptic preparations and other special products. This will prove a convenient reference book for the profession to whom copies samples and literature will be sent upon application.

PERISCOPE.

MEDICINE.

Antidote for Carbolic Acid.

An Italian tailor swallowed by mistake thirty grammes of carbobic acid. Dr. Moreit, of Ancona, using a rubber catheter, immediately introduced by slow degrees into the patient's stomach a strong solution of sulphate of soda, which forms with corbolic acid a harmless mixture. In an hour's time the patient, who had een in a most critical condition, began to revive, Inhalations of ammonia were then used to hasten up the process, and little by little the poisoned man rallied so that an emetic, followed by a dose of lime-water, finished the cure.—*Med. Times.*

SURGERY.

Tape-worm the Cause of Rupture of the Intestine.

Dr. F. Dunlap (*New York Med. Jour.*, February 11, 1893) mentions a case of intestinal rupture occurring in a woman of thirty-one years of age, apparently caused by a tape-worm. When first seen the patient complained of violent pains in the left iliac region, followed in several hours by profound collapse. Rupture of an ectopic pregnancy was suspected, the suspicion being encouraged by the fact that menstruation had been absent for several months. A boggy mass was to be felt in the abdomen, and abdominal section was decided upon and performed. A mass of clot was found in the pelvis, but the pelvic organs were found in a normal condition; nor could any aneurism, which had been thought of, be found. In flooding the cavity a long tape-worm was floated to the surface, and tracing it towards the head, it was found to protrude from a large, ragged rupture in the small intestine. It was fastened about twelve inches above the seat of rupture. Eight feet of the worm were removed from the peritoneal cavity, and about seventeen feet more were passed from the bowel afterwards as the result of an enema. From examination it appeared that there had existed no previous ulceration at the site of the rupture, the ragged gangrenous edges suggesting rather a pressure gangrene. The patient recovered.

OBSTETRICS.

Spontaneous Rupture of the Symphysis Pubis During Labor.

Oelschlager (*Centralbl. fur Gynakol*) has reported the case of a primipara, twenty years old, in which with the onset of labor pains two eclamptic attacks occurred in quick succession. The lower extremities were edematous, and the urine contained a small amount of albumin. The promontory of the sacrum could be touched with two fingers introduced into the vagina. The head was quite high in the pelvis and but slowly followed in the grasp of the forceps, a not excessive degree of traction being exercised. As the head began to rotate in the small pelvis a crack was distinctly heard. Examination disclosed a separation of 1.15 inches in the situation of the symphysis pubis, and the delivery of a living child weighing nine pounds was soon readily effected. On the day following the labor a leather support was applied to the hips. For two weeks the region of the symphysis was tender upon touch and painful upon movement, but a week later the woman was able to be up and about, although a slight degree of separation of the pubic bones persisted.

GYNECOLOGY.

Removal of a Lithopedion Thirty Years in the Body.

Gottschalk (*Centrallbatt f. Gynak.*, *Med. Jour.*), exhibited before the German Obstetrical Society, in March, a lithopedion five pounds in weight, successfuly removed by abdominal section after it had been carried thirty years, causing more or less inconvenience to the patient at different times. The patient was 54, and had passed the menopause four years before. Her first pregnancy was thirty-three years ago, and the child lived. During the second and last, extra-uterine pregnancy was diagnosed. Towards term, violent pains set in, which ceased together with the fetal movements. Peritonitis ensued, and kept her several months in bed. Thenceforth she recovered gradually and was regular till the menopause. The indication for abdominal section was the appearance of severe symptoms of obstruction, especially in the direction of the bladder. The symptoms were clearly due to the impaction of a hard substance, the fetal skull, in the pelvic cavity. The uterus was pushed upwards and backwards against the sacrum, flattened by the fetus, which was as hard as a rock. The tumor reached as high as the umbilicus. The left Fallopian tube ran normally over it, and Gottschalk declares that the fetus, well-preserved, lay entirley within ovarian tissue. The sac-wall was clacified, the placenta still adhered to its inner surface.

NEWS AND MISCELLANY.

Announcement—College of Physicians of Philadelphia.

The William F. Jenks Memorial Prize. The Third Triennial Prize, of Five Hundred Dollars, under the Deed of Trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "Infant Mortality During Labor, and its Prevention"

The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with Obstetrics, or the Diseases of Women, or the Diseases of Children;" and that "the Trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said Trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia."

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in a foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U.S.A., before January 1, 1895, addressed to Horace Y. Evans, M. D., Chairman of the William F. Jenks Prize Committee.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

JAMES V. INGHAM,
Secretary of the Trustees.

An Army Medical Board

Will meet at Washington City, D. C., October 2nd, 1893, for the examination of candidates for appointment to the Medical Corps of the United States Army, to fill existing vacancies.

Persons desiring to present themselves for examination by the Board will make application to the Secretary of War, before September 15th, 1893, for the necessary invitation, stating the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from whence they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal knowledge, from at least two physicians of repute, as to professional standing, character, and moral habits. The candidate must be between 22 and 28 years of age, and a graduate from a Regular Medical College, as evidence of which, his Diploma must be submitted to the Board.

Further information regarding the examinations may be obtained by addressing the Surgeon General U. S. Army, Washington, D. C.

GEO. M. STERNBERG,
Surgeon General U. S. Army.

CIRCULAR OF INFORMATION

FOR CANDIDATES SEEKING APPOINTMENT IN THE MEDICAL CORPS OF THE UNITED STATES ARMY.

The Medical Corps of the Army consists of a Surgeon General with the rank of brigadier general, six Assistant Surgeons General with the rank of colonel, ten Deputy Surgeons General with the rank of lieutenant colonel, fifty Surgeons with the rank of major, and one hundred and twenty-five Assistant Surgeons with the rank of 1st lieutenant, mounted, for the first five years and the rank of captain, mounted, thereafter until promoted to major. Promotion through the intermediate grades of rank from that of captain to that of colonel is by seniority, but there is an examination for the rank of captain and another for that of major, to ascertain the fitness of the officer for promotion. Advancement to lieutenant colonel and colonel takes place without further examination. The Surgeon General is selected by the President from among the members of the corps. All vacancies are filled by appointment to the junior grade.

PAY AND EMOLUMENTS.

To each rank is attached a fixed annual salary, which is received in monthly payments, and this is increased by ten per cent. for each period of five years' service until a maximum of forty per cent. is reached. An Assistant Surgeon with the rank of 1st lieutenant, mounted, receives $1,600 per annum, or $133.33 monthly. At the end of five years he is promoted to captain and receives $2,000 a year, which, with the increase of ten per cent. for five years' service, is $2,200, or $183.33 per month. After ten years' service he receives $2,400, after fifteen years $2,600, and if he remains a captain after twenty years, $2,800 per year. The pay attached to the rank of major is $2,500 a year, which, with ten per cent. added for each five years' service, becomes $3,250 after fifteen years and $3,500 after twenty years. The monthly pay of lieutenant colonel, colonel, and brigadier general is $333.33, $375, and $458,33 respectively. Officers in addition to their pay proper are furnished with a liberal allowance of quarters according to rank, either in kind, or, when no suitable Government building is available, by commutation. When traveling on duty an officer receives four cents per mile and reimbursement of money actually expended for railroad or other fares. On change of station he is entitled to transportation for professional books and papers and a reasonable amount of baggage at Government expense. Mounted officers, including all officers of the Medical Corps, are provided with forage, stabling, and transportation for horses owned and actually kept by them, not exceeding two for all ranks below a brigadier. Groceries and other articles may be purchased from the Commissary and fuel from the Quartermaster's Department at about wholesale cost price. Books and instruments are supplied in abundance for the use of medical officers in the performance of their duties.

ARMY MEDICAL SCHOOL.

By a recent order the Secretary of War has authorized the establishment of an Army Medical School in the city of Washington for the purpose of instructing approved candidates for admission to the Medical Corps of the Army in their duties as medical officers.

The course of instruction will be for four months, and will be given annually at the Army Medical Museum, in Washington City, commencing on the 1st day of November.

Four professors will be selected from among the senior medical officers of the Army stationed in or near the city of Washington, and as many associate professors as may be required to give practical laboratory instruction in the methods of sanitary analyses microscopical technique, clinical microscopy, bacteriology, urine analysis, etc.

The faculty of the Army Medical School will consist of—

1. A *President of the Faculty*, who shall be responsible for the discipline of the school, and who will deliver a course of lectures upon the duties of the medical officers in war and peace (including property responsibility, examination of recruits, certificates of disability, reports, rights and privileges, customs of service, etc.).
2. A *Professor of Military Surgery* (including the care and transportation of wounded).
3. A *Professor of Military Hygiene* (including practical instruction in the examination of air, water, food, and clothing from a sanitary point of view).
4. A *Professor of Clinical and Sanitary Microscopy* (including bacteriology and urinology).

DUTIES AND PRIVILEGES.

A medical officer after completing the course of instruction at the Army Medical School will be assigned for some months as junior at a large military post in order that he may become acquainted with Army regulations, and making of official reports, and other matters necessarily new to him, before he is thrown upon his own responsibility. His stations after that are likely to alternate between the frontier and more desirable points, a tour of duty being usually four years at one place. Leave of absence on full pay is allowed at the rate of one month per year, and this when not taken may accumulate to a maximum of four months, which at the end of four years is then available as one continuous leave. Beyond this an officer may still be absent with permission on half pay.

It is the intention of the Surgeon General to recommend the assignment for duty, as attending surgeons in the principal medical centers of the United States, of medical officers who have not yet passed their examinations for promotion to a majority and, so far as may be practicable, in the order of their seniority. These details will be made for one year only, in order that as many medical officers as possible may be enabled to avail themselves of the opportunities thus offered to become familiar with the practice of the leading physicians and surgeons in this country, and of attending medical lectures, meetings of medical societies, etc. At the end of this tour of duty medical officers will be required to make a detailed report to the Surgeon General showing how much of their time has been occupied by their official duties and to what extent they have availed themselves of the advantages offered for professional advancement.

Absence from duty on account of sickness involves no loss of pay. Medical officers are entitled to the privilege of retirement at any time for disability incurred in the line of duty or after forty years' service. On attaining the age of sixty-four they are placed upon the retired list by virtue of statutory provision. Retired officers receive three-fourths the amount of their pay proper at the time of retirement.

EXAMINATION AND APPOINTMENT.

Appointments to the Medical Corps of the Army are made by the President after the applicant has passed a successful examination before the Army Medical Examining Board and has been recommended by the Surgeon General. The board usually meets twice a year, about April and October, of which due notice is given by advertisement. Permission to appear before the board is obtained by letter to the Secretary of War, which must be in the handwriting of the applicant, giving the date and place of his birth and the place and State of which he is a permanent resident, and inclosing certificates based on personal acquaintance from at least two reputable persons as to his citizenship, character, and habits. The candidate must be a citizen of the United States, between twenty-two and twenty-eight years old, of sound health and good character, and a graduate of some regular medical college, in evidence of which his diploma will be submitted to the board. The scope of the examination will include the morals, habits, physical and mental qualifications of the candidate, and his general aptitude for service; and the board will report unfavorably should it have a reasonable doubt of his efficiency in any of these particulars.

The physical examination comes first in order, and must be thorough. Each candidate will in addition be required to certify "that he labors under no mental or physical infirmity or disability of any kind which can in any way interfere with the most efficient discharge of any duty which may be required." Errors of refraction when not excessive, and not accompanied by ocular disease, and when correctible by appropriate glasses, are not causes for rejection.

The mental examinations are conducted by both written and oral questions, to which written and oral answers are required upon—

I. Elementary branches of common school education, including English grammar, arithmetic, the history and geography of the United States, natural philosophy, the principles of Latin grammar, and upon general literature and ancient and modern history. Candidates claiming especial knowledge of the higher mathematics, ancient or modern languages, drawing, analytic chemistry or other branches of natural science, will be examined in those matters as accomplishments and will receive due credit therefore according to their proficiency.

II. Professional branches, including anatomy, physiology, chemistry, hygiene, pathology and bacteriology, therapeutics and materia medica, surgery, practice of medicine, obstetrics and the diseases of women and children.

Examinations at the bedside will also be conducted in clinical medicine and surgery, and operations and demonstrations upon the cadaver.

Hospital training and practical experience in the practice of medicine, surgery, and obstetrics are of great importance to candidates seeking admission to the Medical Corps of the Army, and they will be fully appreciated and duly credited to those who have had such advantages.

The board has discretion to deviate in such manner as it deems best from this general plan of examination when necessary for the interests of the service.

To save unnecessary expense to candidates, those who desire it may have a preliminary physical examination and a mental examination in the "elementary branches of a common school education," by a medical officer of the Army stationed most conveniently for this purpose, who will act under instructions from the Medical Examining Board.

The merits of the candidates in each of the several branches, and also their relative merit as evinced by the results obtained from the entire examination, will be reported by the board, and in accordance with this report approved candidates will be appointed to existing vacancies or to such as may occur within two years thereafter. An applicant failing in one examination may be allowed a second after one year, but not a third. No concession vill be made for the expenses of persons undergoing examination, but those who receive appointments will be entitled to travel allowances in obeying the first order assigning them to duty.

There are at present six vacancies in the corps to be filled.

GEO. M. STERNBERG,
Surgeon General.

Approved:
DANIEL S. LAMOT,
Secretary of War.

War Department,
Surgeon General's Office,
Washington, D. C., June 30, 1893.

For Pediculosis Capitis

℞	Olei Staphisagriæ	℥j.
	Olei Limonis	ʒj.
	Olei Amygdalae ad	℥iv.

Misce et fiat applicatio.
To be applied to the affected parts daily.

ARMY AND NAVY.

U. S. ARMY FROM AUGUST 20, 1893, TO AUGUST 26, 1893.

By direction of the Secretary of War, a board of medical officers to consist of: Col. Charles H. Alden, assistant surgeon general; Lieut. Col. Wm. H. Forwood, deputy surgeon general; Major Chas. Smant, surgeon; Captain Walter Reed, assistant surgeon and Captain James C. Merrill, assistant, is constituted to meet at the Army Medical Museum Building, in this city on the 11th day of September, 1893, for the examination of candidates for admission to the Medical Corps of the Army.

Par. S. O. 93 Hdgrs. of the Army, A. G. O., Washington, Aug. 23rd, 1893.

By direction of the Secretary of War the following-named medical officers are detailed to represent the Medical Department of the Army at the Pan-American Medical Congress, to be held in Washington, D. C., September 5th to 8th, 1893. Colonel B. J. D. Irwin, assistant surgeon general; Lieut. Colonel Dallas Bache, deputy surgeon general; Major David L. Huntington, surgeon; Major Charles Smant, surgeon.

Board of officers to consist of: Colonel Charles H. Alden, assistant sugeon general; Lieut. Col. Wm. H. Forwood, deputy surgeon general; Major Joseph K. Corson, surgeon, is by direction of the Secretary of War, appointed to meet at the Army Medical Museum Building, Washington, D. C., Monday, September 4th, 1893, for the examination of such officers as may be ordered before it, to determine their fitness for promotion.

Lieut. Col. Wm. D. Wolverton, deputy surgeon general, is relieved from duty at Waterolict Arsenal, N. Y., and assigned to duty as medical director, Department of the Columbia, to relieve Lieut. Col. C. C. Byrne, deputy surgeon general, U. S. Army.

Lieut. Col. C. C. Byrne, deputy surgeon general, on being relieved from duty as medical director, Department of the Columbia, will report for duty as medical director, Department of Dakota, to relieve Colonel Charles H. Alden, assistant surgeon general.

Colonel Charles H. Alden, assistant surgeon general, on being relieved from duty as medical director, Department of Dakota, will proceed to this city and report to the Surgeon General U. S. Army, for duty in his office, and as president of the Army Medical School, Washington, D. C.

Leave of absence for one month, with permission to apply for an extension of ten (10) days, is hereby granted to Captain J. L. Powell, assistant surgeon U. S. Army.

By direction of the Secretary of War the following named officers will report in person to Colonel C. H. Alden, assistant surgeon general, president of the examining board appointed to meet at the Army Medical Museum Building, September 4th, 1893, for examination for promotion: Captain Curtis E. Price, assistant surgeon; Captain E. T. Comegys, assistant surgeon; Captain Walter Reed, assistant surgeon; Captain James C. Merrill, assistant surgeon.

Leave of absence for one month, to take effect upon the return of Assistant Surgeon Glennan from leave, is granted Captain Wm. F. Carter, assistant surgeon.

Major Justus M. Brown, surgeon, is relieved from duty at Fort Meade, South Dakota, and assigned to duty at Fort Wayne, Michigan.

Leave of absence for one month, to take effect about September 1st, 1893, is granted Captain Paul Shillock, assistant surgeon, (in the field) with permission to apply for an extension of fifteen days.

The commanding officer U. S. Troops in the field near Fruitland, N. M., is authorized to employ a citizen physician in cases of necessity during absence of Captain Paul Shillock, assistant surgeon.

Leave of absence for one month is granted Captain R. J. Gibson, assistant surgeon U. S. Army.

THE MEDICAL AND SURGICAL REPORTER.

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ORIGINAL ARTICLES.

MATERNITY HOSPITALS AND THEIR RESULTS.*

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Every obstetrician's dependence in emergencies must be upon himself. If the resources of his information and skill are so limited that he must call in extraneous aid, the lying-in woman is exposed to other risks than those of delay—those of dangerous drugging or ignorant surgical interference. The resourceful surgeon is one with many experiences, and the same fact applies to the successful obstetrician. The lessons of three or four hundred maternity cases never yet made an eminently skillful obstetrician — one to be depended upon in all of the many emergencies liable to be met with in lying-in cases.

The problems, those tests of the practical wisdom of hard earned and well learned lessons, of the very genius of obstetrical skill, arising in many emergencies give no time for settlement by consulting the books, by reference to reported cases or by calling in outside aid. In fact the lessons of the books in many cases would be misguiding. Through many and painful experiences, the lessons of sad results, we have unlearned many of the teachings of the old books.

There is grand promise in the fact that the profession of the period has in it the impulse and the spirit to grow away from and above the old benches. One of the most gratifying and hopeful results of the thorough training which comes of wide obstetrical experience is the doing away with the too free use of instruments in delivery.

Certainly with the lessons of more than two centuries of forceps experience we should be able to form an enlightened opinion as to the value or risks of their use. The consensus of the best authorities, of the opinions of men who speak from the most extended observation and experience, leads to the conclusion that the mortality attending non-interference is less than that attending the use of forceps. In this relation our debt is great to the Dublin school of obstetricians. Dr. Clark, for long master of the Rotunda, stands out as the one heroic figure in the van of those pioneers.

The exigencies requiring the use of instruments are not of such frequent occurrence as formerly believed. Now the citing of a case of instrumental interference is usually accompanied by an elaborate statement and explanation of desperate and otherwise unavoidable conditions. We have learned the evil and bad results of hurry; the welfare of mother and child are no longer to be sacrificed to the exigencies of private practice. With the growth of general intelligence our patients become less tolerant of undue haste, they have an enlightened appreciation of the issues involved, and of well-timed and skillful work, and they make few mistakes in their book keeping, in charging to the correct cause unhappy or fatal results. It is not a wild prophesy when we say that the time is not distant when in all dense communities obstetrics will be a specialty, and in the ranks of its practitioners there will be the cleanest, most cultured and scientific men of the profession. The issues, the often fearful sequelæ of ignorant or ill-advised treatment in cases of midwifery, furnish a strong warning, a resistless argument against the employment in such practice of the inexperienced and unskilled.

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*Read before Pan-American Medical Congress, 1893

The advantage of patients in maternities over private lying-in patients lies in the fact that they are under the strict surveillance of experienced medical men, aided by nurses trained in all the principles and methods of their art. All the environs and appointments are under the control of well defined and intelligent authority,—sanitary and hygienic conditions are of more easy control, the evils of dense crowding can be avoided, and an ideal cleanliness more nearly attained. There are less injuries in maternities from attempts to expedite labor. And from this cause there are more evil consequences than from delay or any other cause; nature is interfered with in doing her part of the work. There is no branch of medical science in which we have so many understood certainties as in obstetrics.

Where our knowledge is defective or incomplete, it is not due to lack of authentic source, of easy and approved means—but to the lack of energy of use. There exist open opportunities of bed-side experience and training, many open doors for clinical study and research, yet there are very many—and the best—kept closed. For this the profession is responsible. It is their mission and duty to heal—it is also their mission, duty and royal right to the use of every avenue through which the best lessons are taught. The tyros going out from our college benches into fields of private practice are ill-equipped for successful obstetrical work, they carry many risks to mothers. We are not claiming that the science or its practice in the hands of any one is perfect,—that cannot be claimed of anything in which our humanity is involved.

There has been gathered a very rich harvest of the results of cleanliness in maternities and private obstetrical work, and we have in these results promise of yet better results in the future. As we grow to know how very simple is our art, how near to nature is its successful practice, we feel less disposed to take off our hats when we speak of our individual work and its success.

It has not been long since obstetrics was the one department and dominated the field of gynecology. Progress has been such that gynecology no longer suffers the reproach of being a pseudo-science, working by guess, by vague suspicion, gaining advances by mere experiments upon human life, groping in the dark in attempts at settlement of problems of health and life, but has grown to work hand in hand with obstetrics and is gaining increased recognition whereever suffering exists. The lessons of both have come to live with us. In both experience teaches the value of cleanliness—that we have no right to tolerate filth in any of its forms—nor to blunder in our work.

The signal advances in obstetrics as in gynecology are of our own generation. As to many anomalies, obscure troubles, the general practitioner has become enlightened, he has acquired the important knowledge which enables him to determine where purely medical or palliative treatment fails, and the only resource left is surgical interference. The obstetrician is not practicing what his forefathers wore out and threw away. Old theories and beliefs have been gradually giving way before the assault of our better facts. Each day finds fewer superstitions in practical medicine and surgery. Dr. Angus Macdonald in a Report of the Royal Maternity and Simpson Memorial Hospital, Edinburgh, condenses truths worthy of mention here: "The more I see of midwifery and gynecology, the more I am confirmed that the safety of patients urgently requires the diligent use of cleanliness. I feel more and more satisfied that operations on the genitals, of whatever sort, are specially dangerous, not so much because of the inflammatory reaction, which is likely to be severe in itself as because there is extreme facility for septic absorption. This is particularly the case where, from aggregation of septic influences, there is specially apt to arise putrescent materials of highly toxic qualities."

The reduction of the mortality in lying-in hospitals from 20 per cent. to almost nil cannot be credited so much to the use of antiseptics as to a more enlightened and strict sanitary regime, a more strict cleanliness. The constant improvement in our operative statistics testifies the value of surgical cleanliness, scrupulous aseptic precautions. The great increase in the average of city life is largely due to greatly increased observance of health conditions. The measure of the physician's responsibility in these lines cannot be over-estimated.

He can kindly, where that will serve, or sternly, where that is needed, urge the lesson that to live amid bad hygienic conditions, in an atmosphere of domestic malaria means disease and death,—that pure,healthy in-door air,freedom from poisonous effluvia and musty odors,cannot be had without the most scrupulous cleanliness, the removal of all bodily excretions, of everything offensive; animal, fluid and organic. There are out-door impurities, sources of air pollution, we cannot at all times and under all circumstances wholly guard against. Streets, alleys and courts are often sources of atmospheric infection over which we have little or no control. The most we can do is to educate public sentiment in the line of a wise sanitary policy and back its administration.

The members of the medical profession have it in their power to make themselves the sovereigns in the enforcement of the wise dicta of sanitary science. They are the real educators in everything that pertains to the public health. The people are willing and anxious to learn the lessons through the practice of which they can avoid disease. The more the obstetrician and medical men generally, press home upon the public the vital truth of the preventibility of many diseases, the sooner we will have a popular understanding of the simple principles of sanitary science and a rigid practice of cleanliness. Let the physician teach the risks of filth infection to his clientele—send the lesson into private homes that bedding, carpets, floors, walls, every appurtenance and furnishing may be a source of uncleanness, that all forms of excretia and impure gases emanating from decaying organic substances are so much pollution.

The apology for this paper, if any be needed, lies in the importance of the subject, its importance to the profession, to communities, and its yet more grave importance to mothers. I would echo the voice of Holmes loud enough for warning. "The woman about to become a mother, or with her new-born infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden, or stretches her aching limbs. The very outcast of the streets has pity upon her sister in degredation when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law, brought down upon its victim by a machinery as sure as destiny, is arrested in its fall at a word which reveals her transient claim for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly, or selfishly!"

I presume a long and somewhat varied experience entitles me to speak plainly and the time for speaking plainly is always present, always *now*. As to the *conscience* with which I speak, that is mine. There are some things about which our national and inter-national medical congresses should speak in no uncertain tones; there are some things that we here at home and our honored brothers of Republics to the south of us should insist upon, everything associated with our profession, with our schools and all their agencies, with respective fields and departments of practice, is a sacred trust. A trust something more than narrowly individual, it is communism in all that it involves, its bond is to prolong and promote healthful human life. The trustees of our schools and maternities hold the highest trust existing in our communities, a trust that reaches helpless mothers and their more helpless off-spring, that reaches the unfortunate in every grade of life, and humanity is their care. Yet they only too frequently do not exercise wisdom and deliberation in the choice of teachers and masters. The time is fortunately not distant when they will be held to more strict account. We have long since proven that maternal deaths are avoidable, deaths not only from sepsis or child-bed fever, but from other causes as well, death in child-bed means an error of omission or commission. The mortality in maternity hospitals is now the lowest. Maternities have settled about all the important disputed points in obstetrical practice. The most perfect work has been done in the maternities of Baltimore, Philadelphia, New York and Boston. Not only has this work been perfect from the standpoint of a low mortality, but the hospitals in which it has been done have done a great work in practical teaching, demonstrating beautifully two points: 1st, That a maternity can be run with a nil mortality; 2nd, That it can unite with its humane purpose practical teaching with a nil mortality. All this has been disputed both at home and abroad. The time is not distant in the future when the directors of maternity hospitals will not dare to appoint a man to direct or have official charge of such vital interests without a rich practical experience and sound judgment. They will be held responsible for the success of their trust, and it is to be hoped will be held criminally responsible for the choice of a person to such trust with no more pride of personal cleanliness and cleanliness of environment than a stable boy, dirty in all the term implies, morally and personally.

It is the teaching of this subject that is of so much vital importance to the profession. Very much of it is fed out from the old books and is worth very little more to the student than is an old almanac for dates. The student gets little of clinical or practical value and goes out from the college to study the science and art of his work upon helpless patients. Every day brings to our notice sad illustrations of the result of such miserably poor and inadequate obstetrical teaching. The directors or managers of our schools are responsible for imperfect, inadequate or false teaching; the profession and the community must and do so hold them responsible. They hold them responsible for the incompetent and unfit men they select to teach; for the injustice done worthy students and for the irreparable mischief worked in communities by obstetrical ignorance. Teachers should not be appointed on account of their pedigree, their family connections or their wealth, but for their brains, their knowledge of their subjects, their love and faculty for teaching, and for the honor and advancement of the school. About all some of those now holding responsible chairs in some of our oldest schools have to recommend them is a volume of prefixes to their names, suggestive of a medical and biographocal index. The shout goes up when doting relatives, maiden aunts and friends who secure their appointment "Now we have a professor of favored parentage, one dating beyond our accepted scriptural Genesis." At the claims of this class the Darwinian would indulge a philosophic smile and note fresh evidence in favor of his theory of the descent of the human species. There should be no small men, mentally nor morally, in the faculties of our great schools. The work of none of us is so well done but that it cannot be out-done—better done. Let each man go back and study the history of his own neighborhood in connection with obstetrical practice and he will scarcely escape being startled by the result.

Recently, within the past few weeks, several lovely women, those moving in the most cultured and refined of Philadelphia society have died in child-bed. Now these untimely and sad deaths are too frequent. In a majority of instances they are avoidable by the exercise of enlightened precautions, through the practice of that skill which comes of experience and without which no man should enter a lying-in-chamber. The old mock, tearful reverence, the pious humility with which the deaths in these cases are credited to providential dispensation will not longer answer. With each death the demand will grow stronger, more universal and angry for better and more thorough obstetrical teaching.

I speak for the pride and best hope of our land, the American student; for the best loved, the purest and noblest of our own or any other land, our American mothers.

THE YEAR of greatest growth in boys is the seventeenth; in girls the fourteenth. While girls reach full height in their fifteenth year, they acquire full weight at the age of twenty. Boys are stronger than girls from birth to the eleventh year; then girls become superior physically to the seventeenth year, when the tables are again turned and remain so. From November to April children grow very little and gain no weight; from April to July they gain in height, but lose in weight; From July to November they increase greatly in weight, but not in height.—*British Medical Monthly.*

TOTAL EXTIRPATION OF THE SCAPULA WITH THE ARM RETAINED.*

A. M. PHELPS, M. D.†

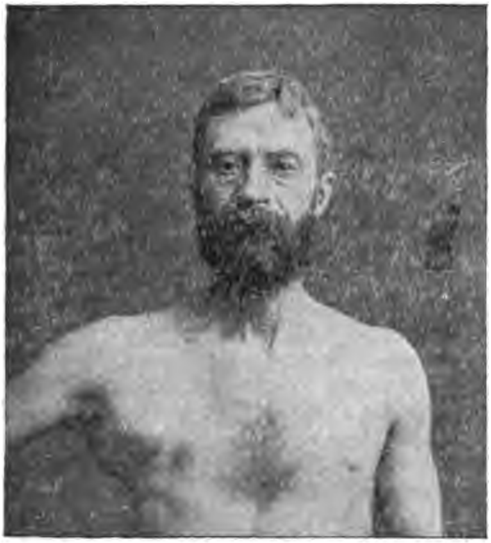

Fig. 1.

Mr. John N. B., of Mount Vernon, aged forty-two years, consulted me on November 21, 1891. I found a large tumor, growing from the scapula, and involving its entire extent. Figures 1, and 2, convey a very correct idea of the extent of the deformity. He first observed the growth three years ago, as a hard, irregular mass, growing from the anterior border of the scapula. It has not been attended by pain until quite recently. He did not know what caused it.

I find that the tumor extends to the axilla, and up under the pectoral muscles, the scapula being somewhat movable. The tumor is nodulated, and the glands in the axilla are enlarged. His general health is good; his occupation is a book-keeper.

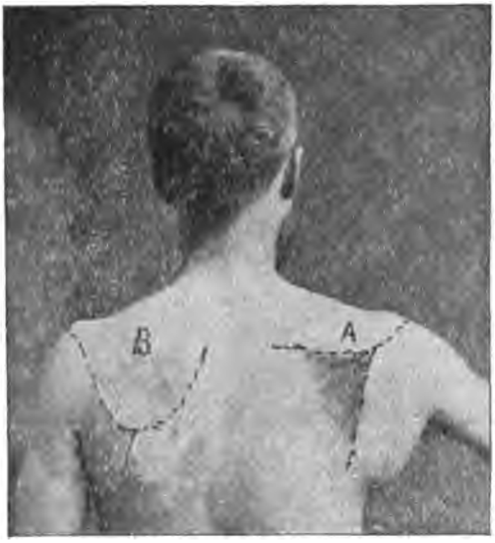

Fig. 2.

A. Langenbeck's incision showing slough.
B. As it should be from an anatomical standpoint.

Dr. W.T. Bull and Dr. Robert T. Morris in consultation, advised extirpation of the scapula, and, if possible, saving the arm and clavicle. I proceeded to operate upon the case at the Post-Graduate Hospital, Doctors Plimpton Mooney, Kelly, and the house-staff assisting. The incision made was that of Langenbeck—see *A.* figure 2. This incision was from the upper and inner angle of the scapula, extending along its spine to the tip of the acromion process. Another incision was carried at right-angles with this line, to the inferior angle of the scapula. The arm was then severed from its attachment to the scapula. The superior flap was now turned upwards, the supra-scapular and posterior scapular arteries being secured; the inferior flap was quickly turned backwards, exposing the posterior border of the scapula, which was then tilted forwards and dissected from its base, the dissection including all of the muscles attached to the scapula, the infra-scapular artery being secured as the dissection proceeded. The scapula was cut away from its attachment to the clavicle, the muscles detached from the coracoid process and the whole removed *en masse.* A few bleeding points were now secured, and the deltoid muscle stitched carefully to the fibrous tissue about the end of the clavicle, the head of the bone resting well up underneath the acromion end of the clavicle. The wound was next carefully stitched up and dressed antiseptically, and the whole suspended in a sling to the side of the body.

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*Read before the Surgical Section of the Academy of Medicine.

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The tumor was found attached to the second and third ribs quite extensively, and was with very great difficulty separated; the time of the operation, including the dressings was 57 minutes. There was no shock, and no higher temperature than 101° following the operation. At the first dressing, it was discovered that the inferior angular flap had sloughed (see *A*, fig. 2). This sloughing of the flap was caused by want of nutrition. The suprascapular and posterior scapular arteries supply this portion of the flap and by Langenbeck's incision they were both cut. Then again, the angular portion of this flap, shelving up over the head of the bone, did not come in contact with the subjacent tissue, therefore sloughing necessarily followed. This I found upon inquiry, was not an uncommon result where the Langenbeck incision was employed. To remedy this, I suggest that the incision and flap be made as in figure 2, *B*. This will secure a flap properly nourished by the supra-scapular and posterior scapular arteries, and probably would not slough; it certainly is an incision which should be tried, because the sloughing of the flap retards the healing process and endangers the life of the patient. The wound healed without pus, and the patient was discharged from the hospital at the end of three weeks.

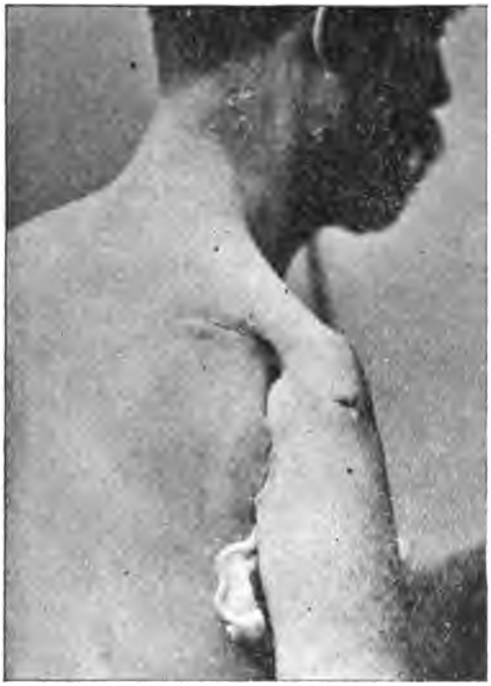

Fig. 3.

Two weeks after his discharge, he was attacked with "la grippe," and one week or later, six weeks after the operation, he began coughing, and raised large quantities of pus. Dr. Wilcox diagnosticated a circumscribed empyema in the upper lobe of the lung. His report is here appended:

January 2nd, 1892. Contracted a severe catarrhal bronchitis. At that time dullness to middle of second rib on right side; line of dullness horizontal and running to vertebral spines.

Jan. 4th. Night sweats; cough out of proportion to severity of bronchitis; hectic; great prostration; absolute flatness in area noted above; distant respiration; vocal fremitus and resonance markedly diminished.

Jan. 7th. Empyema ruptured into secondary ascending bronchus of upper lobe of right lung. Six ounces of light colored, diffused pus evacuated.

Jan. 9th. Empyema ruptured into inferior outer angle of wound. One-half ounce of similar pus discharged. Direct connection between bronchus and wound, the cavity of which was cleared by coughing.

Jan. 12th. External orifice closed. Tympanitic percussion note over region named; high pitched amphoric respiration; few tenaceous rales.

Jan. 16th. Opening into bronchus closed; signs of slight dullness; somewhat distant respiration; few crepitant (pleural) rales.

Jan. 19th. Bronchitis entirely cured.

Feb. 1st. A traumatic exudative pleurisy had closed some of chest.

Feb. 2nd. Infection of this exudate from purulent bronchitis and not from wound.

Feb. 3rd. Resulting empyema.

Feb. 4th. Positive diagnosis from physical signs, when the contents of empyema measured less than seven ounces.

Feb. 5th. Adhesive pleuritis preventing general pneumothorax after rupture.

Feb. 6th. External opening allowing free emptying of pus cavity (important therapeutic indication).

Feb. 7th. Rapid healing of pus cavity by secondary exudative pleuritis.

This empyema opened into the bronchus and also externally at the upper border of the wound. From this time on recovery was rapid. The empyema was not produced by the trauma or by infection, but was due entirely to the attack of "la grippe," and was simply a coincidence. The wound was healed perfectly by April 4th, 1892. One observation which we made was that the exposed end of the humerus was entirely healed over at the end of forty-two days, the cartilage was gradually absorbed by granulations appearing through it, and the skin did not grow over the head of the bone until the cartilage was entirely removed by the granulating process. Although the power of motion at the shoulder is limited, the hand and arm are useful.

An examination made by Dr. Smith, the pathologist of the Post-Graduate Laboratory, showed that the tumor was made up entirely of fibrous material, and was not malignant. It is interesting to note that in this condition of non-malignancy, were found the nodulated appearance of sarcoma, the pain attending on sarcoma, and the enlargement of the glands which we would expect to find in malignant disease, or in sarcoma which was undergoing destructive changes. The patient up to date has remained perfectly well. There has been no return of the disease and to all appearance, he is a well man.

I have examined the literature upon the subject of total extirpation of the scapula, the arm and clavicle being retained and find up to the date of this operation, that there have been 118 cases reported, 58 of which were for tumors, 9 for caries and injury, 51 not reported upon. There were 25 deaths, 3 undetermined. The age varied from 8 to 70 years; the mortality was 22 per cent.

The conclusions at which I arrived are: (1) total extirpation of the scapula is not an extremely dangerous operation to perform, if care is taken to cut in such an order as to secure the supra-scapular, posterior scapular, and infra-scapular arteries; (2) in cases of malignant disease attended by extreme vascularity, I would suggest that the subclavian artery between the coracoid process and the thyroid axis be compressed by means of a large curved needle, transfixing all the tissues, carrying underneath everything a silk ligature which would be tied temporarily, thus controlling the hemorrhage. It will be remembered that the scapula receives its vascular supply superiorly from the thyroid axis, which is given off from the subclavian; (3) that Langenbeck's incision should not be used for the reasons already given. The curved incision which I suggest (fig. 2, *B.*) is based upon the vascular anatomy of the parts.

The Patent Medicine Business.

Light has been let into the patent-medicine business by a recent lawsuit in the English courts, wherein one Alabone, the proprietor of a specific, sued one Morton, his former manager, for stealing his ideas and testimonials and setting up an opposition trade. Alabone is an M.D. from Pennsylvania; Morton made no pretence of being a doctor. As has happened before in such cases, the ingredients of the Alabone consumption cure and its bogus nature came out in the trial, as did the qualities of some of the affidavits of cure. Alabone won his suit, but the judge in giving judgment in his favor suggested the propriety of having both the parties prosecuted for infringement of the Apothecaries' Act. The London *Times* suggests that the real victory in the case is with the public, which may profit by the disclosures made in the course of the trial as to the worthlessness of nostrums. But the mainstay of the patent-medicine gentlemen is people who do not concern themselves very much about. the law reports. What they want is something to take, and they take that which is offered with the most persistence and recommended in the largest type. However worthless any particular patent medicine may be, it is nobody's business to make that worthlessness public, whereas it is the particular business of the proprietor that the medicine shall be systematically cracked up and put upon the market. The true way to kill off a patent medicine is not to demonstrate that it is of no value, but to invent a new one and advertise it in bigger letters. — *Harper's Weekly.*

COMMUNICATIONS.

LATERAL ANASTOMOSIS BY THE MURPHY BUTTON FOR ARTIFICIAL ANUS; RECOVERY.

G. D. THOMAS, M. D., CHICORA, PA.

Mrs. H., white; age 50. The mother of four children, the youngest 13 years old. The husband of this patient called at the office on Friday, Jan. 6, 1893, for something for pain in the bowels. Furnished him appropriate remedies for an attack of intestinal colic. The patient not improving, I was called the next evening (Saturday) to see her and found her suffering extreme pain, located principally in the left umbilical region, with soreness on pressure at the point of greatest pain. The patient was slightly jaundiced and for constipation, the day before had taken a physic with one small stool resulting. The pain was accompanied by tenesmus and occasional vomiting of a bilious nature. Thinking I had an attack of biliary colic to treat, I resorted to proper medication alleviating pain with the hypodermic needle. Saw the patient again on Sunday. Bowels not relieved. Face pinched and jaundiced. Vomiting aggravated and still of a bilious color. Further questioning of patient a history of a " lump " in right groin was reported. An examination of this region modified our diagnosis to that of strangulated femoral hernia of the right side. Taxis failed to relieve her and all medication having proved of no avail, operation was at once decided upon and assistance requested.

The next day, Monday, operation was performed by Dr. R. S. Wallace, of East Brady, assisted by Dr. J. L. Campbell and the writer, both of Chicora. The loop of intestine was soon found but proved very difficult to reduce. Bands of adhesions had firmly united bowel, sac and abdominal walls in one mass. After half an hour's labor by a peeling and snipping process the bowel was returned in a fair condition. All of the sac that could be removed was taken away and the sutures introduced. The patient stood the operation well and started on what seemed an uneventful recovery.

Eight days later a serous discharge appeared from drainage sinus, followed by a rise of temperature, and two days later the sloughing of the sac *en masse*. The sinus continued to discharge but was kept of a serous type by antiseptic injections and dressings. All attempts to heal the sinus proved unavailing. The bowels had a tendency to constipation after the operation, but by careful treatment movements were had almost daily. The patient began moving around the house, the bowels becoming harder to move, till February 21, they failed to respond to treatment. This was soon followed by a milky discharge from the sinus, small in amount. The next day the discharge was more abundant, of a brownish-yellow color, being fluid and floating very little solid matter. We now had a fecal fistula resulting from the stricture of the bowels. The amount discharged from the sinus depended somewhat on the condition of the bowels. When a movement *via naturalis* was obtained the discharge nearly ceased. When the bowels became constipated the discharge was enormous, soaking dressings and bedding in a few minutes. Periods of constipation now alternated with loose bowels for four weeks, when the stricture of bowel being regarded of a permanent nature, a second operation was advised.

The second operation was performed by Dr. R. S. Sutton, of Pittsburgh, assisted by Dr. S. D. Bell, of Butler, and those present at the former operation. A coeliotomy in the *linea alba* was selected and an incision 3½ to 4 inches long made between umbilicus and symphisis pubis. The operation was quickly performed requiring but nineteen minutes from first incision till buttons were introduced. The steps in the operation, after locating the loop of intestine involved, were the same as recommended by Prof. Murphy, of Chicago, in his original article. First, introduction of running stitch "purse string"; second, button-hole incision; third, insertion of buttons; fourth, securing "purse string"; fifth, meeting male and female portions of button.

Although this operation has been performed a number of times in abdominal work since it was given to the profession in December last, this is believed to be the first use of the buttons for artificial anus. Nothing was done with the old sinus, nor the five to six inches of intestine in each arm of the loop below the insertion of the button. The operation was performed at noon on Saturday March, 25. The patient though much emaciated entered the operation without any fear. She rallied well and as in first operation required no morphine or other agent for pain. Was nauseated from the anæsthetic and was restless through the night, sleeping but little. For three days previous, rectal alimentation had been adopted; this was continued with the addition of brandy.

Sunday 26th. Pulse 98 to 112, temperature 98.6°. An urticaria of entire body appeared that entailed much suffering from its intolerable itching, the patient declaring it would drive her insane if something was not done for her relief. Soda and borax bathing failing to relieve, the patient was anointed with the officinal zinc ointment, to which was added three drachms of chloroform per ounce. The relief was immediate and permanent.

Monday 27th. Pulse 95 to 110, highest temperature 100.4°F. Restless. Rectal alimentation continued and one drachm bovinine every two hours added to the diet, the latter *per orem*.

Tuesday 28th. Pulse 95 to 110, highest temperature 99.6°. Insomnia persisting.

Wednesday 29th. Temperature normal. Oedema of ankles. Urinary examination with negative results. From this on there was no elevation of temperature till April 5th, when a small stitch abscess formed in the line where the sutures had been removed four days before; the stitches all being out on the eighth day. On the seventh day broth was added to the diet by the mouth and rectal feeding resorted to less frequently. The bowels moved sooner than we anticipated, the first movement occurring in the first twenty-four hours. It was small and from the lower bowel only, where the alimentation had been maintained for a number of days. On and after the sixth day bowels moved from above and have continued to do so, the tendency to constipation that the patient has had for years being overcome. The sinus discharged less and less and in three weeks bowel contents ceased to pass from fistula and ten days later the sinus healed. From the first the sinus was treated with peroxide of hydrogen, antiseptic injections and iodoform in injection and dressings. The button seemed to leave its moorings on the fifth day as determined by palpation through the emaciated abdominal walls. The nurses were instructed to be very watchful of dejecta for the button. but it failed to make an appearance to their vigilant eyes.

During the convalescence the patient suffered from an attack of acute articular rheumatism. In fact three attacks; one antedating first operation from which she was just recovering; the second between operations, and the third late in her convalescence. Dating from the appearance of œdema of left ankle she was much troubled with phlegmasia in that limb, extending to Poupart's ligament. Repeated examinations of urine, chemically and microscopically, proved negative results. Coupled with this was a frequent micturition which seemed to be entirely of nervous origin. The hernia that became strangulated was an old one dating back to her third pregnancy, some seventeen years before. It had never occasioned her any inconvenience except the mental one—that there was a lump in her groin that ought not to be there. No truss or other support had ever been applied. Our case that started out as strangulated hernia gave us a varied career, the complications being sloughing of sac, stricture of bowels and an artificial anus, besides having rheumatism, phlegmasia, eczema and urticaria as sequelæ to make up the full program.

The only element short of a perfect recovery at this date is a stiffness of knee joints, superinduced by rheumatism plus her long confinement, plus a semi-upright position maintained by patient despite protestations, her weight being supported by her feet resting on a box foot-rest while she reclined on a toboggan slide made of half a dozen pillows. This however is rapidly improving and the patient can be reported as, recovery perfect.

The advantages claimed by Prof. Murphy were exemplified in our case.

No imperfect application of sutures; no sloughing; no imperfect apposition of openings; pressure uniform; no absorbing of sutures too early; length of operation minimized and shock the least possible for an operation of this magnitude. We had some concern about the loop of bowel that was "switched off," but up to this date has given us no trouble.

NOTE.—Was called to see Mrs. H., August 11th. Complained of intestinal pain. Followed the next two days by vomiting and purging, the pain continuing but in a mild form. Early on Monday morning, four months and twenty days from operation, the button was passed without trouble *per via naturalis.* Will say patient has continued in excellent health, being robust and going about her household duties. G. D. T.

INTUBATION WITH REPORT OF CASES.*

G. D. NUTT, M. D., WILLIAMSPORT.

My object in presenting this paper before you to-day, is not so much to record the results of the small number of intubations that have come under my observation, as to bring the subject of pseudo-membraneous laryngitis before this Society, for a full, free and intelligent discussion.

A disease, so prevalent, dangerous and destructive, certainly should call for more consideration at our hands than has been accorded it in the past. In looking over the transactions for the past five or six years, I fail to find any paper or discussion on this subject except a few remarks in a paper read before this society at Harrisburg by J. M. Batten on "The Treatment of Diphtheria."

The absorbing interest in all surgical diseases as obtained by the introduction of aseptic surgery, and the great advancement and success of abdominal work, has had a tendency to divert professional thought from medical subjects, which generally do not yield such brilliant results.

While mothers are being saved from a torturing death or chronic invalidism by rendering them incapable of producing more off-spring, pseudo-membranous croup is claiming those already born with a frightful mortality.

Jacobi in Pepper's System of Medicine says, "Infants and children under two years almost invariably die." "The percentage of average mortality rates from 80 to 90 per cent." Flint says, "Of twenty-two cases analyzed by Dr. Ware, nineteen proved fatal." Dr. Edward Rosenthal stated in a discussion before the Philadelphia Medical Society, "That in a serious of some four hundred and twenty odd cases which he had followed, and studied in his practice and those of his friends, which were not treated by intubation or tracheotomy, but three recovered." Such figures as these, gentlemen, cannot but arrest our attention and make us shudder at the risk our little ones have to endure, in this fatal disease.

Whether all cases of pseudo-membranous laryngitis are from the same cause, and are but different phases of diphtheria, seems to be a disputed point. While many of our best authorities believe that diphtheria and membraneous croup are one and the same disease, arising from the same micro-organism and only differing in degree, and location, more recent investigations tend to prove that they arise from different bacteria and thus form two distinct and separate diseases.

From a close observation and careful study of the clinical history of diphtheria, and membranous croup, covering a period of twenty-three years and including many hundred cases, I have frequently noted many different phases of the deposit, so much so, that I have long believed we have three distinct varieties or types of membranous formation liable to invade the larynx, differing widely in the character of the deposit, mode, and location of invasion, and results.

In the regular or common form of diphtheria, the disease commences with a high fever, considerable constitutional disturbance, and a membranous deposit of a thick greyish-white, which rapidly forms and spreads over the tonsils, with a tendency to invade the soft palate, nasal passages, or downward to the vocal cords, and larynx. If arrested it soon separates, coming off in thick leathery patches, quite offensive, and very contagious. When severe, the sub-mucous cellular tissue and glands of the neck become infiltrated with the poison, swell, and soon contaminate the system. These cases usually are followed by some form of paralysis. If it invades the larynx it is usually in the latter stage of the disease when the patient has become weak and debilitated; and is in a poor condition for either the employment of tracheotomy or intubation. Consequently the rate of mortality is very high.

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* Read before Penna. State Medical Society, 1893.

There is another form of diphtheria differing from the above in many important features. The invasion presents about the same symptoms, but the membrane is thin and remarkably white in color, rarely has any odor and very little glandular involvement. It spreads over tonsils, pharynx, soft palate and larynx. It is very firmly attached to the mucous membrane,and is slow to separate. It seems to wear off or absorb, rather than become detached. It yields more slowly to the effect of mercurials than the previous form, but does not weaken the patient so much or so rapidly, although the regular paralysis usually follows. Its tendency to invade the larynx, is in marked contrast to the previous form.

In this form it is not unusual for the false membrane to remain on the tonsil or some portion of the mucous membrane two or even three weeks. In one child that had to be intubated, the tube was left in fourteen days before the last vestige of the membrane disappeared.

The third type is the membranous croup of the old writers. It occurs in isolated cases, with but little constitutional disturbance except symptoms of cold and hoarseness. It always invades the larynx and trachea and is never seen above the vocal cords except in small isolated patches. To the naked eye the membrane cannot be distinguished from other forms of diphtheria. It yields readily to mercurials if the system is brought under its influence early. Its contagiousness is very doubtful. It usually attacks only one member of the family and is rarely associated with other forms of diphtheria. Although very fatal, it generally causes death by its mechanical effect. Consequently the results of intubation in these cases are very satisfactory, and yield a good percentage of recoveries if properly managed.

Although the clinical histories of these three forms or types of diphtheria seem so different in their nature and formation as to strongly suggest a different micro-organism, yet practically, the treatment is the same. My observation accords with many others in the value of the mercurial form of treatment, but to insure its effect it must be given early, and in frequently repeated doses, so as to insure its rapid physiological effect. By this treatment the disease is arrested, and the false membrane soon separates or becomes dead.

When the larynx becomes involved its mechanical effect becomes an important factor in the successful management of the case; and whether we should perform tracheotomy, or intubation, and *when*, is a question of vital importance.

My own experience is decidedly in favor of intubation if performed early. Just as soon as the obstructed breathing, and prolonged expiration show that the lungs cannot perform their proper function.

I have performed *tracheotomy* several times for membranous croup but the results have never proven satisfactory. True it was not used until death seemed imminent; but one of the most serious objections to its use, is the inability to obtain the consent of parents and friends before the danger point is reached. It is not only a tedious and bloody operation, but the care that has to be excerised in the after management of the case is a serious obstacle to its success in general practice.

It is not to be supposed that placing a tube in a child's throat alone is going to save our patient. It simly overcomes the mechanical obstruction to breathing, providing the membrane has not extended too far in the trachea; and prevents death from suffocation, thus giving us more time for its future treatment. The subsequent management of the case requires good care, and such modifications of our remedies as the presence of the tube requires.

A warm room heavily loaded with moisture, and the frequent inhalation of steam from slacked lime, are essential to the success of the case. The continuance of the mercurial treatment can best be carried out by allowing the child to inhale the fumes arising from burned calomel.

The proper feeding of the patient is one of the most objectionable features of intubation.

Very little if any liquid should be given by the mouth during the first twelve hours. If the patient is very weak use rectal injections. If necessary, however, to excite cough, in order to expel accumulated mucus, an occasional sip of water may be given. After that period either boiled milk, or lime water and milk, may be given at intervals, while the child is lying on its back with head very low as recommended by O'Dwyer, either in spooonful doses or sucked through a tube or nipple. Any soft, semi-solid substance that has no lumps or hard particles, can be given. Such as corn starch, junket, cup custard and the like.

The patient requires constant watching, especially if the string is allowed to remain in the tube, Eternal vigilance is the price of success.

During a discussion of membranous croup before the Philadelphia County Medical Society about a year ago, I made the remark, that I had had at that time seventeen *consecutive* cases of intubation with only four deaths. I did not mean that was my percentage of recoveries.

When I first began to use the tubes some five or six years ago, the first three cases intubated all died; but the tubes were not introduced until the last moment, when the patients showed decided symptoms of suffocation, by blue lips and tips of fingers, congested lungs, and weak, thready pulse. Although relief was obtained for a time, death soon followed from congestion of the lungs.

The next six cases were intubated in a much earlier stage of the disease and all recovered; followed by eleven more cases with only four deaths. Since that time the percentage of recoveries has not been so good; due in a great measure to the class intubated. During the past year a large percentage of the cases has been of a severe diphtheritic type. I have not hesitated to use the tubes even in apparently hopeless cases if there was a likelihood of giving relief.

In giving a tabulated statement of all the cases intubated up to date, I have for convience and comparison divided them into diphthertic and membranous croup.

The whole number intubated has been forty-four. Recoveries twenty-five, deaths nineteen. Of these, twenty-three cases were diphtheritic croup, with ten recoveries, and thirteen deaths. Twenty-one cases of membranous croup, with fifteen recoveries, and six deaths.

There were eight children under two years of age, with two recoveries, and six deaths. There were fifteen between the ages of two and five years, with six recoveries, and nine deaths. While there were twenty-one five years old and over, with seventeen recoveries, and four deaths. The youngest child was eight months, and the oldest ten years old.

In three cases that died of diphtheritic croup, the croupy symptoms were relieved, and the tube removed, but death occurred later from the systemic poisoning. In a number of cases the membrane was detached at the first insertion of the tube, and in three of these, the tube was never re-inserted; the patients making good recoveries. In one case, as I have mentioned before, the tube remained in fourteen days; the usual length of time being four or five days. In no case was intubation resorted to without there being a deposit in the throat or larynx. If not seen, some portion of the membrane was detached and expectorated when the tube was inserted.

These figures if they prove anything, go to show:—

First. That we have in intubation a most valuable and safe method of lessening the mortality of this fatal disease.

Second. That in all forms of membranous croup, in children under two years old, the mortality is very high but by intubation and careful management we may save some.

Third. That in those between the ages of two and five years, we may reasonably except from 25 to 30 per cent of recoveries.

Fourth. In those that are five years old and over, a large percentage will recover, ranging anywhere from 50 to 75 per cent.

He was Exposed to Success.

Rosevelt—When Bloomstein was in the hospital with us, you remember, we used to consider him stupid. How did he manage to build up such a large and remunerative practice?

Hannemann--He was just shrewd enough to establish himself in a town where the local paper published a column of medical advice each week.—*Puck.*

OSTEO MYELITIS*

O. WELLINGTON ARCHIBALD, M. D., JAMESTOWN, MD.

J. C. H., aged 24, Sykeston, N. D. Some 12 years ago patient fell on frozen ground somewhere in Canada, injuring left leg; says attending physician afterward removed 32 pieces of bone from limb. From that time until he came under the notice of Dr. Cooke during the latter part of December, 1892, had no pain in limb with exception of winter of 1886, at which time, pain described as of dull and aching character lasted several weeks. With that exception limb had seemed perfectly strong and health during the 12 years was good.

When first examined a very noticable enlargement was found over crest and anterior surface of tibia, about the middle, somewhat more reddened than parts adjacent and slightly sensitive to pressure. Patient complained of excruciating, boring pains, greatly intensified at nights and constantly increasing in severity, and diagnosis of periostitis, or osteomyelitis was made and the probable necessity for early operation explained to patient. I directed poultice to be applied at night and tincture of iodine several times during each day. Impossible to secure sleep at night with any kind or reasonable quantity of drugs. About the middle of January, exploratory incision was made the result of which was entirely negative. Some relief followed for several days, after which pains recurred with increasing severity. Osteo-myelitis was determined upon as cause of trouble and patient came to Jamestown for operation. Upon arriving there an operation was made consisting of an incision some 6 inches in length, which resulted in exposing 2 areas of necrosis opposite each other about centre of bone, upon external and internal surfaces, with sinuses running down towards center, from which considerable pus escaped. The establishment of drainage resulted in complete relief, the two openings were packed with gauze tents and patient returned home a week after, with prognosis of probable amputation in near future. After about 3 weeks, during which time I was in correspondence with Dr. Cooke in whose practice the case occured, another and more radical operation was determined upon and performed on Feb. 17th, with the assistance of Drs. Cooke and Moore.

When etherized, the limb was rendered bloodless by use of Esmarch bandage, and tourniquet applied above knee. An incision 8 inches in length was made down centre of anterior surface of tibia, and the flesh together with the periosteum carefully dissected up so as to expose the entire width of bone. Numerous foci of necrosis were found upon surface, and periosteum entirely gone in some places, leaving surfaces of bone rough and pitted. Beginning at upper angle of incision the trephine was applied at four points at intervals of about one inch, the instrument being carried well down to center of bone. The intervening bridges of bone were then removed with mallet and chisel and whole interior of bone for some 6 or 7 inches thoroughly scraped with Volkmann spoon.

A number of pockets containing from a few drops to several drachms of pus were found. Running off from lowest trephine well down to within one and one one-half inches of ankle joint was a cavity 2 inches in length containing fully one-half ounce of pus, the walls of which, after removal of pus and thorough scraping, were found to consist merely of outside, cancellous tissue—to be simply a shell, in fact. Copious bichloride irrigation was used throughout operation and great care exercised to remove every particle of necrotic matter. After careful cleansing and irrigation the wound was tightlypacked with Senn's decalcified bone chips and periosteum and flesh sutured with cat-gut, leaving an opening of about one inch in length at center where approximation was impossible, due to result of former operation; wound dressed anti-septically and patient put to bed. Time of operation one hour and 15 minutes. The wound healed throughout by first intention and patient returned home ten days after. Result, perfect recovery.

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*Read before North Dakota Medical Society, 1893.

MOVABLE KIDNEY AND SOME NERVOUS AND OTHER SYMPTOMS ARISING FROM IT.*

SAMUEL AYERS, M. D., PITTSBURG.

Mr. President: The subject of Movable Kidney has not, I think, received that consideration which its importance demands,—and for several reasons.

First. Though Rayer, as early as 1839, brought the matter clinically before the attention of the profession, it is only within recent years that extended studies have been made in this direction; and therefore a knowledge of the subject has not been widely diffused.

Second. The region of the kidney has been generally regarded as terra incognita, almost beyond the hope of exploration, and the organ itself as too inaccessable for direct examination, and

Third. Until the present improved operation for nephrorrhaphy had been devised, nearly all means for the relief of displaced kidney were unavailing.

Hence it is not strange that the body of the profession has been slow to realize the frequency and the importance of the trouble.

Thanks to the efforts of such men as Lindner, Landau, Keen, Litten, Edebohls, Keppler, Scmitt, Newman, Hahn and others, we are in possession of an extensive and valuable literature, and the operation for nephrorrhaphy as now practiced is one of the most important and successful in the field of surgical procedure.

Movable kidney is of much more frequent occurence than was generally supposed by earlier writers, doubtless because it was then not often sought for. Newman quotes 11,000 autopsies in which only 11 cases were found, and Skorszewsky discovered only 32 cases in 1,030 women.[1] But Edebohls, who has recently made a valuable contribution to the subject[2] states that in an examination of 500 women, he found the kidney movable generally on the right side, in 90, or 18 per cent. Lindner discovered the same abnormal condition in one out of every five or six women examined by him.

By movable kidney is here meant the organ freely movable within or out of its fatty capsule for a distance of from two to eight inches or more from its normal position. This is differentiated from the so-called floating kidney, which is generally congenital, and within the peritoneal cavity, having a mesonephron formed by a reduplication of peritoneum. Notwithstanding this distinction, it is probable that both the movable and floating kidney are attended by similar symptoms.

If we begin with the proposition which is indeed quite axiomatic, that a prolapsed organ, no matter where it be, is liable to create mischief and to be a source of pain or discomfort, we shall at once appreciate the harm that may result from a movabie kidney. The traction upon the renal nerve and vessels, the general dragging upon the sympathetic nerves and their ganglia, the reflex irritation thus excited, the undue pressure of the displaced organ, on the bowel or other parts with which it may be in contact are quite enough to create extensive disturbances in the economy. Then again, as has happened, if the kidney becomes incarcerated or twisted so that the circulation or outflow be obstructed, hydronephrosis may supervene and the life of the patient be imperiled.

Since movable kidney has been so infrequently recognized until recently, and is perhaps now often overlooked, and since as above stated, its presence is usually attended by symptoms both persistent and distressing, it is reasonable to infer that the liver, but especially the pelvic organs have been often unjustly accused; for some organ or structures had to be saddled with the symptoms, and what more natural than to hold the much abused generative organs responsible.

However, there are some extenuating circumstances in cases in which this error has been committed, for the effects of a displaced kidney closely resemble those of pelvic disease, and can often be differentiated only by the results of operation. Edebohls in some of his cases, which were complicated with various uterine lesions, operated only on these, and found that after the lapse of sufficient time, most of the symptoms persisted, but that after the fixation of the kidney by suture the patient generally recovered, thus proving the dependence of the trouble on the movable kidney.

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* Read before Penna. State Medical Society, 1893.

[1] Diseases of the Kidney, Morris, p. 27.

[2] American Journal of the Medical Sciences, Vol. 105, Nos. 3 and 4.

It must be food for serious reflection to many gynecologists, that after operating successfully on different diseased pelvic organs, including the rectum, they have failed to relieve the patient, who persists in her chronic invalidism, and in the complaint of dragging lumbar pains, and side aches, backache, dyspnœa and dyspepsia, which it had been promised would disappear after the operation. A displaced kidney has been overlooked, and the result is, a failure. The patient is called hysterical, and all sympathy and further assistance denied her. The moral is brief and emphatic—in every investigation of the pelvic or abdominal organs, the position of the kidney should be carefully ascertained.

During the past year I have seen six cases of movable kidney in women, four among my private patients, and two through the courtesy of Dr. Werder, who has kindly permitted this reference to them. In four of these cases, the right kidney only was movable, in two, both organs. In only one of them, a case of Dr. Werder's, has nephrorrhaphy been done, which proved entirely successful. In one of my cases, both kidneys being very movable, the woman had consented sometime ago to operation, but an intercurrent disorder has postponed it.

The symptoms of this abnormal condition are quite marked, and even uniform, as I have observed them and as detailed by other writers. Edebohls, in the paper above referred to, summarizes six leading symptoms in uncompliated cases, which I here quote, "Digestive disturbance, chronic in character, general nervousness, epigastric pain, usually located somewhat to the left of the median line, at or near the free border of the left costal cartilages, cardiac palpitation, inability to feel comfortable or to sleep on left side." In addition to these symptoms, I have noted decideds pinal pain in one case, referred to me as "spinal irritation," great dragging and aching and sense of weight just below the free border of the ribs on the side corresponding to the prolapsed kidney, coccygodynia in one case, severe periodical attacks of pain in the region of the kidney, in one case, which I formerly took to be uncomplicated lumbo-abdominal neuralgia from unknown cause, periods of mental depression, a sense of great fatigue and tire in the lower extremities after the least exertion. Two of my cases had all the stigmata of so-called "nervous prostration," and this has lead me to seriously inquire whether this trouble may not often be the chief cause of some cases of neurasthenia in both men and women.

Dyspeptic troubles were present in all my cases, and of a very obstinate character; also constipation, whether produced by the pressure of the kidney on the duodenum as alleged by some, or whether from the general disturbances of nutrition.

The causes of movable kidney are yet somewhat in doubt. Some writers think it chiefly due to the absorption of perirenal fat, which seems a very plausible theory, though Keen states that in some of his cases the normal amount of adipose tissue still remained. Traumatisms from falls, strains, etc., are also doubtless leading factors in the etiology. Lean persons with lax abdominal walls, and child-bearing are potent predisposing causes. In one of my cases the trouble dated from an attack of typhoid fever, and was much aggravated by a fall some years later.

The diagnosis of this condition is not difficult if the physician will but remember to make a careful examination, and this is usually easy, since movable kidney is commonly found in thin women, with little resistance of the abdominal walls. The method I have pursued is to place the patient upon an operating chair, the plane of which shall be about thirty degrees from the horizontal. The patient lying supine, with legs flexed, the mobile kidney will slightly descend by gravity from its normal position; then by deep upward pressure from behind just below the border of the last rib with the fingers of the left hand, if examining the right kidney, and counter pressure over the front and side of the abdomen, just opposite, there will be little difficulty in outlining the organ, and noting its size and mobility.

Occasionally the kidney will slip up so high under the liver that it cannot be easily dislodged. If the patient now be instructed to deeply inspire, and hold her breath a moment, the kidney will descend and may be felt to slip back between the fingers of the two hands during expiration or by slightly relaxing the pressure.

The size of the organ and its mobility can usually be quite clearly made out. Some writers advise for the examination that the patient sit on the edge of a chair, leaning forward, with the hands resting on her knees, but I have never had occasion to try this method.

The prognosis of movable kidney is quite unfavorable without operative interference, indeed the organ is perhaps never securely held in position by any plan of treatment save surgical. Temporary benefit by belts, compresses or pads may be obtained, but such measures are extremely disappointing.

If one will firmly compress the loose kidney with the hand, the very best of all supports, while the patient stands erect, and note the facility with which an inspiratory effort will force it from under his grasp, the futility of all ordinary appliances for this purpose becomes at once apparent.

Nephrorrhaphy or the fixation by suture of the kidney to the abdominal wall offers the only permanent relief. This operation as now performed is followed by a mortality of less than three per cent., and by a percentage of recoveries from symptoms varying from sixty to ninety.

In the excellent paper of Dr. Keen,[1] read before the American Surgical Association in 1890, 134 cases are reported as having been operated on by different surgeons, with four deaths. And no more forcible argument could be advanced in favor of nephrorrhaphy in properly selected cases, than that suggested by Keen's 4th case there reported, the patiet being a physician.

But it is strongly advised here that this operation be not hastily or rashly undertaken. A movable kidney is not equally disturbing to all who have it. My friend, Dr. Stewart, of Pittsburgh, recently told me that he found such a kidney in one of his patients who had no symptoms whatever resulting from it, and I have heard of other similar cases. Just as there may be no ill effects from uterine lesions in some women, so there may be no manifestations from a movable kidney. This, though, is doubtless exceptional, and we have good ground for stating that in women and men of nervous temperament, this abnormal mobility of the organ is a leading factor, if not the chief one, in the production of many nervous and painful phenomena.

It is further suggested that where this trouble is complicated with various pelvic lesions, these be first cured and sufficient time allowed to estimate whether the movable kidney is the disturbing agent. In one of my patients who had besides a movable kidney, endometritis, laceration of cervix and perineum, rectocele and hemorrhoids, these last have all been recently repared in order to determine this point.

It is not the purpose of this paper to enter into the details or methods of the operation for nephrorrhaphy. These can be obtained from the most recent surgical works and journal articles, nor does the paper claim to be a contribution to the literature of this important subject. Its aim is to bring the matter again before the attention of the profession; to advise a more careful investigation into the symptoms heretofore attributed too exclusively to disorders of the sexual apparatus; to urge a more thorough examination of the kidney in every case, and the performance of nephrorrhaphy as soon as it is positively determined that the symptoms are serious, that the loose kidney is the offending organ and that other measures of relief have proven fruitless.

Vaseline as a Lubricator.

Novotny Memorabilien warns against the use of vaseline as a lubricator for sounds and other instruments introduced into the bladder, as he has twice found this substance left behind in the bladder, serving as a nidus about which a mass of detritus had collected, and giving opportunity for the deposit of urinary sediments. In one case the quantity thus massed together upon a quantity of vaseline weighed ten grains.

SODIUM BISULPHITE is reported to produce excellent results in tonsillitis and coryza. Tablespoonful doses of a satuated solution are given every hour or two for twenty-four hours, or longer if necessary, the disease being usually controlled in twenty-four hours.

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[1] Transactions of the American Surgical Association, Vol. 8, 1890, p. 181.

DIARRHŒA IN CHILDREN.*

J. D. WEAVER, Norristown, Pa.

ETIOLOGY.

Logically I feel that I must begin with the *constitintion.* A child born with a vice is so liable to take on a fatal form of diarrhœa in summer that we dread the approach of the heated term. Therefore, if I were going to blot out this trouble, I would begin with the parents, and allow only the sound in body, mind and soul to marry.

2. *Surroundings* have much to do with running out the light of the little one through its alimentary canal. Filthy and heated apartments, coupled with poverty, certainly lower the vital powers to an alarming extent.

3. *Age.* Holt gives in his table the greatest frequency in the second six months. A record of 772 cases shows:

1st six months	119 cases
2nd " "	237 "
3rd " "	149 "
4th " "	125 "
Over two years	142 "

4. *Dentition.* It is possible that in certain cases and at certain times this is a factor in producing diarrhœa; but not often enough for any of us to dismiss an anxious mother with the words, "Oh, it is only teething, and it will not do to stop the diarrhœa at once." Never allow the laity to neglect a diarrhœa.

5. Brings us to one of the great factors, *diet* and *feeding.* Of 1942 fatal cases recorded by Hope and others, 97 per cent. were bottle-fed. I do not remember loosing a single case of diarrhœa that was fed exclusively from the breast. These facts, then, are certainly alarming and it behooves us to make a greater effort to have our girls so trained physically that when they become mothers they shall be able to perform the duties of maternity.

Why is artificial feeding so dangerous in summer? How many cases of diarrhœa have any of us treated this last winter, known as the coldest for many years? None worth mentioning, and these can be accounted for other than by feeding. It cannot be due to the chemical composition of the milk else our babies would fail in winter as well as in summer. Nor is it wholly due to improper or over-feeding, although I am compelled to admit that over-feeding, irregular and too-frequent feeding and the habitual use of improper food, all unite in producing infantile indigestion; and this dyspepsia is a predisposing cause of diarrhœa. But these evils exist in winter as in summer, so my query as to why artificial food is so dangerous in summer is still unanswered. Since diarrhœal diseases occur with greatest frequency in summer, and with exactly the same conditions except high temperature, rarely or not at all in winter, one would naturally suppose that the heat is the important factor. It is true that heat so lowers the vital forces that the usual amount of food, of whatever kind, cannot be digested with the same vigor, but I firmly believe if the food were decreased two-thirds and the hygienic surroundings were in keeping, that the majority of cases of indigestion and diarrhœa could be avoided. We are struck with the fact that the greatest mortality occurs in the first few weeks of continued hot weather, while we would suppose, if high temperature were the sole cause, the last month when the temperature is highest would present the greatest mortality. Holt thinks the reason why July records greater mortality than August is that a certain number of children are born to die. In other words the weaklings succumb; the strong are left and able to withstand the telluric changes. While this is no doubt true, I would add that in August the doctor and laity are more alert and greater care and precautions are taken to preserve a higher standard of health. Dr. Seibert of New York, has studied every summer month for ten years, separately, as to maximum and minimum temperature and relation of these to the prevalence and mortality of diarrhœa. These observations, which I will not here recount, show conclusively that there is no constant relation between the degree of heat and amount of diarrhœa, and consequently heat is not the direct agent that produces diarrhœa.

We now come to the chief causative factor which we believe to be *bacteria,* a certain degree of atmospheric heat and artificial feeding being necessary conditions in their formation. Summer heat brings forth a micro-organism that grows and multiplies. In fact its procreative powers are so great that it is not in the mind of man to compute the offspring of a pair for one week, let alone a summer. These live, grow and multiply in artificial food and to this germ we must look for the cause of the great danger of artificial food in summer. The hot season is the one for rapid growth, maturity and decay in the vegetable kingdom, to which most of the specific causes of disease known belong.

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* Read before the Montgomery County Medical Society, 1893.

PROPHYLAXIS

Having a definite conception of the causes of summer complaint, the prevention is simple, providing the laity will follow instructions.

1. Watch children with a vice; support and build up as best we can.

2. Let the sanitary surroundings be the best that can be provided. House rent is dear, air cheap. If it is a home of poverty persuade the mother to take up her dirty old rag carpet during the summer months and keep the house clean and sweet. I saw an ideal sanitary home the other day—an Italian's. Not a particle of unnecessary furniture, no hangings, no carpets. From cellar to garret as clean as a new pin. Children dressed in a single garment. Everything looked cool and comfortable.

3. Give careful instruction on *foods and feeding*. Ignorance here is fatal. Of course, we will urge every mother to nurse her child at her breast. I have not in all my cases this summer been called to see a child suffering from diarrhœa that was nursed exclusively at the breast. Learn and teach the capacity of a child's stomach; there is not the least danger of feeding too little. Be careful of too frequent feeding. Especially at night I would reccommend the latter.

Outside of cow's milk, the physician should exercise great care and judgment if he allow any other kind of food for an infant under two years. "One man's meat is another man's poison," is true also of babies. We are at times compelled to try other than the staple articles of diet, but in all such cases the reason should be clearly given that this particular food is only allowable for this condition. By all milk is considered the chief article of diet, and is the universal food in artificial feeding. Let us get it to the consumer in as perfect a condition as possible. If it is the microbe in the milk that causes indigestion and diarrhœa, let us kill the animal. An enterprising worker found two hours after milking, in 16 drops of milk examined 9,000 bacteria, in an hour more 31,700, and 25 hours after 5,000,000 had developed. As there seems to be no doubt that cholera, typhoid fever, diphtheria, scarlet fever, and diarrhœal diseases are contracted and disseminated from contaminated milk and water, I would suggest that we get our milk from a dairy near at hand so it need not be handled often, nor heated by long exposure in transportation. The dairyman should not feed his cows brewery and deleterious slops, but should keep them in good pasture lands, and in clean and well ventilated stables. See that they get good food and pure water to drink. The milkers should have clean hands, and wash the udders at each milking. They will also see that the vessels are clean and sweet. The milk should be kept at a temperature of fifty degrees till delivered to the consumer. Having the milk properly delivered at the home, it should not be allowed to stand in pitchers, etc., but should at once be boiled. Endeavor before feeding (by taking from and adding to) to bring cow's as near as possible to the chemical composition of mother's milk. Without entering into details of diet for infants, I give a practicable formula from *Annals of Hygiene*: Boil milk, skim off top film (serum albumen), add ten per cent. lime water, twenty-five per cent. boiled water (more or less according to age of child), and thirty grains lactose to each ounce. Should be kept in air-tight bottles or earthen vessels that can be made air-tight, placed on ice and used as needed. By these means you have sterilized milk which cannot sour. You have removed the indigestible serum albumen, increased lime salts, sugar, and water to human milk standard. If we remember that during the first four weeks an infant requires twelve to sixteen ounces of food in twenty-four hours, at two and three months old from twenty to twenty-four ounces, and so on, we are not likely to overfeed. I think very often a child is overfed because the mother is ignorant as to size of organ she is so anxious to fill and glut. At birth the stomach resembles my thumb as much as anything I know of, and holds five drachms; a week old seven drachms, and increases in size in ratio of one for first week, two and a half for the fourth, and so on.

To sum up, prophylaxis demands of us:

1. Care as to surroundings.
2. The education of the laity up to importance of regularity in feeding, dangers of over-feeding and as to proper diet of infants just weaned.
3. Proper restrictions on transportation and sale of milk.
4. The destruction of germs in all foods given, especially milk, by sterilizing, and cleanliness in care of bottles, nipples, etc.
5. Prompt attention to all mild derangements, especially in summer.
6. Lessening amount of food, and increasing amount of pure water during periods of excessive heat.

INTRA-UTERINE ASPHYXIA WITH REPORT OF THREE CASES.*

GEO. F. HULBERT, M. D., St. Louis, Mo.

To those who have had the experience of believing and declaring that the child in utero was living and that everything was all right and looked forward to a happy termination of the parturition then in hand, may possibly from time to time realize the chagrin and sense of defeat when upon the birth the child has been found to be practically dead, yet not dead for the heart still beats with a strong but slow pulsation. Every effort at resuscitation is resorted to; you are cognizant of the fact of air penetrating and distending the alveolar spaces, evidenced by the increased vigor and rapidity of the heart pulsations; and yet in spite of that, after long continued effort, we gradually see slip through our hands the remaining spark of life and the child is in fact dead. It having been my good fortune or misfortune to have three experiences of this character occurring in my obstetrical work, I have deemed it possibly of interest and hope it will be of some value and satisfaction to those who have had or may have experiences of this kind, to peruse these cases and draw their deductions therefrom.

A similarity of circumstances and conditions appertaining to the child as well as to the mother and the character of the labors, and the fact that the normal limits were not apparently encroached upon in any respect, as well as the fact of the peculiar condition briefly detailed above, has emboldened me to call attention to the conditions and to place on record these cases, not that they are especially new or not, but that many others may have had the same or like experience, yet the fact remains that the literature does not abound with information or anything specially calling attention to the class of cases under consideration.

The first case was delivered in a perfectly natural way by natural force; the two subsequent ones were made instrumental deliveries advisedly, simply for the reason that he felt the possibility of a repetition. In all of them he was certain and positive that he heard the fœtal heart not longer than one-half hour before delivery was accomplished; heard it distinctly but somewhat weakened in its force. At the time of delivery in all, the appearance presented by the children as they came through the vulva was one of extreme pallor, with slight if any evidence of cyanosis save a deepened tinge of the lips, with absolute muscular relaxation; there being apparently no response on the part of the muscles to any irritation that might be made. The heart was pulsating at the rate of from 40 to 50 per minute. The usual methods of artificial respiration were resorted to in all, to the extent of introducing the catheter into the trachea and thereby insuring a passage of air into the bronchial tree and alveolar spaces.

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*Abstract of paper read before Am. Association of Obstetricians and Gynecologists, at Detroit, June, 1893.

That the air did penetrate was further evidenced by the slight crepitus easily heard during compression of the chest in the expiratory parts of the respiratory act. Artificial respiration was maintained until the heart ceased beating; until it ceased to respond to the stimulus presented by the aeration of the blood by the artificial respiration. In none of them were there any external evidences of pathological conditions, development having been well accomplished. The umbilical cords were not without the normal limits and it was only when the placenta was reached that there were any conditions present that might possibly account for the peculiar condition of the children. Here in all three cases were there found blood clots occupying the placental surface in over half of its area. These clots were well formed, intimately attached to the placental tissue; smooth upon the uterine side. There was nothing indicating the fact that the clot had been torn from the uterine surface, but rather that placental separation had taken place and the clot had formed and become adherent to the placental tissue. So far as the mothers were concerned, they were in average good health; the first a primipara, the last two multipara. The character of labor was not over twelve hours duration and presenting nothing especially attracting attention outside of the fact that the first was one of those cases which might be termed "piston-rod" form of delivery, in that the head was forced down to the peritoneum at each pain, and upon the disappearance of the pain promptly receded to the brim. This was frequently repeated, so much so that he seriously contemplated applying the forceps, and regrets that he did not in order to enable the head to catch beneath the symphysis. The character of the pains were not sustained and vigorous in any of them, but rather more short and inefficient. In none of these cases was chloroform used and in only one, the first, a rectal injection of twenty grains of chloral given during the first stage. The element of compression upon the head was not at all excessive and would not have attracted attention. In the last two cases there was no pulsation appreciable in the cord; in the first case there was no record of this fact. The children were separated from the mothers immediately, and in the first a small amount of blood was permitted to flow through the severed end of the cord. Unfortunately in none of them did he obtain a post-mortem, and as before stated, the only anatomical lesion that he could testify to is the presence of the blood clot occupying an extensive part of the area of the placental surface. There was only a moderate amount of the amniotic fluid following the birth of each child. In the first two cases dilatation was well advanced before the membranes ruptured; in the last case rupture occurred at the beginning of dilatation. The points for consideration are:

(*a*) The presence of the fœtal heart pulsations so soon before delivery.

(*b*) The normal character of the labor.

(*c*) The extreme pallor and relaxation of the child at birth.

(*d*) The presence of the cardiac pulsation after delivery.

(*e*) The absence of any attempt upon the part of the child to perform the respiratory act.

(*f*) The response upon the part of the heart to the benefits of accomplished artificial respiration.

(*g*) The anatomical conditions presented by the placenta.

Pneumotomy in Abscess of the Lung.

J. J. Matignon, of Bordeaux, has made some observations upon a case of pneumotomy for abscess of the lung, which are of practical interest.

He describes the condition of a young man who kept on wet clothes, after falling into the water while perspiring, in July, 1889. The patient felt a distinct chill while in the water, and a week after this exposure he was attacked with a stitch in his right side and had fever. Frequent relapses occurred from imprudence on his part. Aspiration of the chest was resorted to, with injection of eucalyptus-oil. On January 27, 1891, Baudrimont performed pneumotomy for a abscess of the lung. The cavity was washed out with a solution of boric acid, and powdered iodoform was dusted into it. The wound was dressed with gauze and a bandage. Six months later the patient was examined and declared to be well.—*Journal de Medecine de Bordeaux.*

SOCIETY REPORTS.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting July 21, 1893.

MYOMA OF UTERUS; OPERATION; RECOVERY.

DR. A. SCHACHNER (Visiting): Myoma of the uterus removed from a patient thirty-five years of age. She has had this growth, her physician, Dr. Beckels, tells me for about three years. The adhesions were confined to the posterior portion of the tumor. The growth was removed and the pedicle treated extra-peritoneally. The patient made a very nice recovery. I am under obligations to Dr. Cecil for assisting me in this operation. For the first few days the bowels were a little troublesome and obstinate, but this feature was finally overcome by high enemas of fresh ox gall. The stomach was in such a condition that it would not retain any of the salines. Several purgatives were administered hypodermatically which did not seem to have any effect. High injections of ox gall with some sulphate of magnesia finally relieved the bowels, and from that time on she had no further trouble. The uterus weighs two pounds.

MULTIPLE CYST OF OVARY—OPERATION—RECOVERY.

This tumor I diagnosed as one of the uterus, but proved to be a tumor of the ovary, and I judge it to be a multiple cyst. The reason I took it to be a myoma or fibroma of the uterus was that the clinical history pointed to this conclusion. The patient had uterine hemorrhages, and the position and manner in which it fixed the uterus all led me to believe that it was a myoma or fibroma of the uterus, and I gave this as my opinion, and was supported in this by others who had also seen the case. The tumor while in position was very firm, and so firm that the attending physician had questioned the propriety of removal, thinking that there were too many adhesions which would contra-indicate this procedure. I suggested, however, that as the patient was a middle aged woman that an exploratory incision should be made at least to see what the real condition was, and if it proved as extensive as it seemed to be before the incision, the operation might then be abandoned without any practical risks to the patient. A medium incision was made and I passed my hand into the abdominal cavity and down underneath the tumor to try and determine whether there were many intestinal adhesions; this created such a hemorrhage that I concluded we had better push the operation to a close. I enlarged the incision which ran almost to the ensiform cartilage, and fortunately found no adhesions posteriorly; there was a band which anchored it to the abdominal wall 1½ inches in width and ½ to ¾ of an inch in thickness; also quite extensive omental adhesions in which the omental vessels were as large as my little finger. The adhesions were very readily separated and the tumor taken away. From the time the incision was made until I commenced suturing occupied thirty minutes, and from the beginning of the suturing until the operation was completed occupied eighteen minutes, making forty-eight minutes altogether in removal of the tumor. The woman has had absolutely no unfavorable symptom. It is the only laparotomy of this character I have ever seen where the patient never vomited even once; she had some little nausea about the third day. I gave her a whole bottle of citrate of magnesia at one dose; this was very effective and produced such coliky pains that morphine, ⅛ grain, had to be administered. Sutures were removed on the fifth day and the wound had united throughout to the pedicle by first intention. The pedicle of this tumor was also treated extra-peritoneally. It was drawn out, the peritoneum was stitched around it with silk, the pedicle was ligated with silk and hysterectomy pins placed in the stump for support. It is now almost two weeks since the operation and I think I can safely say that recovery is assured. I saw her last night and the case seems to be running a perfectly normal course, and the pedicle, which is entirely without the peritoneal cavity, is commencing to give way nicely, so I can safely call it a recovery. The tumor weighs fourteen pounds. Several physicians saw the case before the operation and estimated that the tumor would weigh about twenty-five pounds; I estimated it at twenty pounds, and the result shows how deceptive these growths are. We often read of one-hundred pound tumors, but I think in many instances this is an exaggeration. I mean to say that one-hundred pound tumors of the abdominal cavity are an extreme rarity; I believe they are very much oftener reported than they really exist.

I have a case now which is being prepared for operation, in which I do not think the tumor will reach seventy-five pounds, and if it reaches sixty-five pounds I will be a little surprised. I first made a diagnosis in this case of unilocular cyst, but I will say that several gentlemen had seen the patient before me and they all made the same diagnosis. I say this with no discredit to them, as the woman would not submit to a thorough examination. The examination being made through a thin wrapper and only by palpation, and she refused operation until her condition reached such a desperate stage, that she finally consented on the bare chance she still had of recovery. I had her removed to the Infirmary, taking about two and one-half hours to get her there, and made a small incision when a large mass was visible something like the tumor presented in the last case. I inserted a trocar into the tumor but found nothing; I incised the tumor about an inch and a half deep and examined it with my index finger, but still got nothing. Her condition was such that I did not care to push the operation further, and sent her home. She had at the time of the operation a pulse of 130 to 140, and went on the table with this. Six months afterward I saw her with pulse of 80, and told her I would like to make another examination, as I could not make myself believe that there was not a cyst. I told her I would like to introduce the aspirator needle. I introduced the needle and drew off three gallons of fluid; returning in about ten days I drew off two gallons minus 1½ pints; making a total of five gallons minus 1½ pints of fluid, which still left her with a tremendously enlarged abdomen. The measurement of this young woman was fifty-two inches around the largest diameter of the abdomen, the tumor reaching to the ensiform cartilage.

I have carefully weighed all of the fluid withdrawn and will be able to determine accurately in the end how much the tumor weighs.

CASE OF PRECOCIOUS DEVELOPMENT.

Dr. J. L. Howard: This patient is a little girl eleven years of age who has a good family history; her hygienic surroundings however are not very good. About a year ago she suffered a great deal of pain and tenderness over the mammary region. About the first of June she had distinct hystero-epileptic attacks, very marked, motor convulsions, general opisthotonos, etc. I did not see her until she had had three or four of these attacks. Soon after the first attack she had a hemorrhage from the bowels; without having any fecal evacuation she would have several small stools, probably ½ dram of blood each time, mixed with a good deal of mucous. At first I thought it was a case of membraneous enteritis. Whenever she would have one of these attacks it would be preceded by a hystero epileptic attack, and at the same time she would have this marked tenderness over the mammary region, very painful to the touch. About this time I also noticed a swelling over the mammary region. You will notice she is very poorly developed for her age, and I thought the case would be one of some interest. Dr. Bullock has seen the case with me. It looks like a case of precocious development; she is still having the peculiar attacks; passed some blood to-day. This hemorrhage from the bowels recurs about every two or three weeks without any regularity, lasting probably from twenty-four to thirty-six hours. There is now some swelling of the mammæ, but sometimes it is more marked. She has had scarlet fever, measles, whooping cough and all the diseases peculiar to childhood. I was not able to determine what the attacks were until finally I saw her in one.

The question in my mind has been whether this condition of the mammary glands had anything to do with the hemorrhages from the bowels. They will run their course of twenty-four to thirty-six hours in spite of anything I have been able to do. No microscopical examination has been made of the stools, but the material has the appearance of stools in membraneous enteritis. The patient is very anaemic as you see.

DISCUSSION.

Dr. T. S. Bullock: The mammary glands are not nearly so much enlarged or engorged as when I saw the patient about two weeks ago. I have taken considerable interest in the case from the fact of the periodical loss of blood from the bowels, and have been somewhat puzzled to determine the nature of this hemorrhage. The only conclusion that I could arrive at was that it is one of those extremely rare cases of precocious development.

Dr. D. T. Smith: I would like to ask Dr. Howard his reason for pronouncing the convulsions hystero-epileptic. Hystero epilepsy is quite a violent affection, and outside of France is rather rare.

Dr. J. L. Howard: I simply pronounced them hystero-epileptic for the reason that they were violent, much more so than hysterical attacks. When these attacks come on she will fall down just like we know people do in epilepsy, but she does not froth at the mouth. The attacks simulate epilepsy to such a marked extent that we could not tell the difference until we tried to rouse her. At one time I started to give her chloroform and she immediately came to herself. After that I only had to talk to her of administering chloroform and she would return to her senses.

Dr. T. S. Bullock then read a paper on

URETHRAL GROWTHS, WITH A CASE.

The urethra of the female is more prone than that of the male, to be affected with new growths. They are divided according to their structure. The most frequent are what are denominated carunculæ, and polypi. The carunculæ almost without exception grow from the mucous membrane of the urethra, and are invariably excessively sensitive. The patient complains of intense pain on micturition, sexual intercourse, in walking and upon the slightest contact with the clothing. Pain is increased by the warmth of the bed, and the patient becomes extremely nervous and hysterical. Rarely, however, does serious mental trouble ensue, though one or two cases of suicide are recorded. Polypi in this situation vary in size from that of a pea to a hazel nut. They are usually pedunculated and bleed readily, and are very sensitive. Their most frequent seat is the external orifice on the posterior wall a short distance from the entrance.

Carcinomatous neoplasms are extremely rare and are usually the result of extension from the vulva or vagina. Venous angeiomata affect the urethro-vaginal tubercle, or the anterior half of the urethro-vaginal septum. Not infrequently it attains a large size and projects between the labia. It is not at all sensitive.

Sarcoma—only one case reported.

Prolapse of the urethral mucous membrane, or eversio urethræ is not common. In addition to the prolapse of the mucous membrane, there is a proliferation of the connective tissue. It is met with both in the young before the age of puberty, and also in old multiparæ. In the latter it is thought by Dr. Emmet to be due to pressure during labor, by which the tissues are forced into the urethra from behind causing dilatation of the canal, either partial or extending to the outlet. At the same time there is a laceration of the submucous tissues. The tissues at the neck of the bladder are free and by pressure of the child's head are crowded into the urethra in the same manner as the rectal tissues are rolled out of the anus. This condition may exist for a long time without symptoms, but as a rule after a time it develops extreme sensitiveness and soon creates difficult and painful micturition, pruritus vulvæ and leucorrhœa.

Fibromata also occur. They are painless, have a smooth surface and are elastic. A word as to the diagnosis of urethral neoplasms: Carunculæ can only be confounded with two conditions, one is prolapse of the urethra, and the other syphilitic warty growths. From the first it is distinguished by careful examination, which will reveal the fact that it completely encircles the meatus. From the second by the presence of other evidences of syphilis around the vulva and on other portions of the body.

Urethral venous angeioma is recognized by its color and lack of sensitiveness. Fibromata by their smooth surface, elasticity, painlessness and the fact that they do not readily bleed on manipulation.

Many of these growths may exist without causing trouble. This is the case with small condylomata. fibromata and mucoid polypi. If they attain any size the first symptom is a disturbance in the excretion of the urine. Later, pain in micturition, pruritus, frequent desire to void the urine and dysuria. As the growths enlarge the urethra is dilated, the mucous membrane becomes hyperæsthetic and hyperæmic, and a catarrhal inflammation is set up. Following this are erosions and fissures.

Treatment: If the growth causes no trouble, non-interference is the rule; but if it causes pain or disturbance of function it should be removed. This is best accomplished by excision followed by thorough cauterization with nitric acid, or better still the actual cautery.

The case which I present, is, I think, an interesting one. It is a fibroma. The following is the history elicited:

A. T., aged thirty-two years; came to the University Clinic complaining of "female trouble;" menstruation regular, slightly painful, three to five days in duration, amount of blood lost normal. Has had four children, the last one fourteen years ago; has had two miscarriages, the last two months ago. All of her labors natural; general health good.

Examination reveals a tumor protruding from vulva; it is two inches in length and is attached to the posterior half of the meatus urinarius. It is lobulated, smooth, dry, elastic and painless. The urethra is very sensitive and an attempt at catheterization occasions great pain. She states that she has no pain on micturition, sexual intercourse, or any other symptom traceable to the growth. She says she first noticed tumor two years ago, at which time it was as large as at present. If the statement is true she certainly gives herself little concern about her genito-urinary organs. Except that it is unsightly and may eventually cause trouble by its increase in size; no interference is necessary.

DISCUSSION.

Dr. J. G. Cecil: This is such a rare growth, so entirely unlike anything I have ever seen, that I really have no opinion about it. I believe, however, that it ought to be removed with the knife, and I think it will require a microscopical examination to determine the exact nature of it. The question has arisen as to whether this is a tumor of the urethra or not. The base of the tumor occupies or about covers the space between the meatus and the anterior vaginal wall, yet it seems to occupy or involve certainly the lower half of the urethral circle. I should judge that its character was certainly very different from that of common growths which we see in this region, and would be disposed to think that it would probably show up under the microscope as a fibrous growth.

Dr. W. L. Rodman: I think that this growth can be called a tumor of the urethra because it is encroaching upon the lower floor of the canal, but I do not think it had its origin in the urethra; I think it began below. I believe it will prove to be a fibrous growth. The growths that are most liable to occur in the female urethra are the ordinary carunculæ. The growths that occur most frequently in the male urethra are the ordinary papillomatous growths in the penile portion, and the true fibroid polyp, which occurs almost invariably, from the prostatic urethra. This I think is a fibrous growth, but fibromas are very uncommon in the female urethra. They are also uncommon in the penile portion of the male urethra being almost invariably limited to the prostatic portion. For this reason and from the appearance of the growth, I think that it began below the urethra, and has simply encroached upon it secondarily. It is an hypertrophied caruncle.

Of course, the treatment is excision as Dr. Bullock says, and the application of some cautery afterward. The best treatment for the ordinary caruncle I believe to be scraping off with scissors and then the application of chloride of zinc, which I prefer to all other things and believe it is the best application that can be made. It is very fortunate that all tumors of either the male or female urethra are nine times out of ten located in the extreme anterior portion, as otherwise it would be very difficult to treat them surgically. The only exception being the fibroid-polyp which I say is almost always limited to the prostatic portion. Necessarily these tumors usually give rise to a great many distressing symptoms, pain, etc. But it is a fact that you may have tumors even deeper situated in the canal with almost no symptoms at all.

I have seen a number of growths of the female urethra, but few in the male.

Dr. E. R. Palmer: The removal of the growth in the case shown by Dr. Bullock could certainly be very easily accomplished. I would suggest that it be done by cocanizing the parts, cutting it off and the application of electro-cautery. I do not think the growth involves the urethra at all.

I do not agree with Dr. Rodman in regard to growths of the urethra: In the daily use of the urethrascope it is not infrequently that I find tumors of the male urethra situated back of the cut off muscle.

Dr. Turner Anderson: I examined the growth under discussion at Dr. Bullock's office yesterday, and cannot agree with the gentlemen who have spoken that it is not a urethral growth. When we consider that there is no space practically between the meatus urinarius and the anterior margin of the vagina, that the urethra lies in the anterior wall of the vagina, the meatus urinarius is simply surrounded by condensed areola tissue, we must conclude that this is either a growth of the urethra, or a growth of the anterior wall of the vagina. I made a careful examination of it to determine whether it was a growth of the urethra or of the vagina, and so far as I am able to form an opinion it springs from the posterior semi-circumference of the urethra. Dr. Bullock has very accurately described the case, and I am convinced that it is fibrous in character.

As regards removal, there would be no difficulty in doing so, and it is not necessary to discuss that part of the question. There would be very little hemorrhage, as it is wholly disconnected with the vestibule. Operations in this situation are not attended by much hemorrhage unless we open the net work of vessels which are recognized as the bulbs of vestibule. I think if the gentlemen who believe that the growth is not connected with the urethra will make a more careful examination of the case, they would be convinced this growth springs from the posterior portion of the semi-circumference of the urethra, and is fibrous in character.

Dr. W. O. Roberts: I agree with what Dr. Anderson has said in connection with the origin of the growth, and also as to the treatment. It seems to me that removal with the knife would be very much better than with galvano-cautery. I think there would be practically no hemorrhage, and the result would be better with the knife than with cautery. Experience goes to prove in amputation of the penis for instance, where there is liable to be very much more hemorrhage than in the removal of this growth, results are far better when amputation is done with the knife than when done with galvano-cautery and the danger from sepsis seems to be less with the knife.

Dr. T. S. Bullock: As stated in my paper, my reasons for believing this to be fibroma was that most other growths in this situation bleed very readily on handling and are very painful. Fibromata are the only growths occuring in this situation that are absolutely painless, smooth, elastic nonfriable, do not bleed, and occasion absolutely no inconvenience unless they attain a considerable size and drag on the urethra, thus creating trouble by their weight.

In regard to treatment, if I can get the patient to consent, we intend to operate upon her at the University Clinic before the class, but I think we will have some difficulty in getting her to consent to the procedure.

As regards the growth being hypertrophied carunculæ—it seems to me if this had been the case she would have noticed it long prior to two years ago.

SUPRAPUBIC CYSTOTOMY, WITH REMOVAL OF THREE STONES, ONE ENCYSTED, FROM THE BLADDER—RECOVERY.

Dr. W. O. Roberts: The early part of June I was asked to see a case in consultation with Dr. E. R. Palmer for stone in the bladder. The patient was sixty-seven years of age and had been complaining of bladder symptoms for three years. He had been treated by internal medication for one year without any benefit, then he was treated by another physician by washing out the bladder with boric acid solution and using a catheter. He passed water very frequently and soon after he began to use the catheter, he had to use it every few hours. At the time I saw him with Dr. Palmer, he was using the catheter every two hours; he had not suffered any great pain, nor did he have any marked symptoms of stone. Dr. Palmer had discovered the stone a short time before I saw the case with him. He told me at the time that he was under the impression that the stone was a large one, and most likely encysted. We made a careful examination under cocaine with a sound, and came to the conclusion that there were two calculi. His prostate was examined through the rectum and found to be quite large, but there was no enlargement of the third lobe. Operation was advised, and owing to the large size of the prostate we agreed to do the suprapubic cystotomy. On the 23rd. of June, the operation was performed at the Norton Infirmary, Drs. Palmer, Yandell, Pearce and several others assisting. The bladder was not contracted, we could easily get into it eight or ten ounces of boric acid solution. As soon as the bladder was opened I found two calculi, the smaller of the three here presented, lying loosely in the bladder; after their removal passing my finger high up to the fundus on the left side, I discovered the largest stone presented which you will see is very rough, the rough side of it being adherent to the bladder. After detaching and removing it there was a considerable oozing of blood. The bladder was drained for forty-eight hours by strips of iodoform gauze introduced and left hanging out of the abdominal wound. The patient has gotten along uninterruptedly well, and while he went for two years without passing any water, yesterday he passed naturally a small quantity.

DISCUSSION.

Dr. E. R. Palmer: The case reported is one that has interested me very deeply. I think Dr. Roberts failed to emphasize the fact that the clinical symptoms of stone were entirely absent. The patient is a very charming old gentleman, but like most old men very set in his views and opinions of things; he had been assured that his trouble was cystitis and had been treated by washing and internal medication, and was very much set against instruments. He had never had the sudden cut off in urinating, never had any pain in the glans penis. He had none of the symptoms that would point to cystic calculi. A remarkable feature of the case to me was that for eighteen months he catheterized himself about twelve times per day, about every two hours. He is the father of one of our leading druggists and from whom he had learned the virtue of surgical cleanliness. As he had not passed any water voluntarily for eighteen months, and had been washed without any benefit, I told the druggist that his father must be examined with proper instruments. In passing a steel sound No. 29 French, I was struck with the fact that as soon as I passed it through the cut-off muscle the sound almost dropped into the bladder. The posterior urethra, instead of being constricted by the middle lobe or contracted by general prostatic enlargement, was exceedingly roomy. As the sound dropped into the bladder, it struck a calculus, which delighted me very much because of my belief that we could assure him of decided relief, if not complete cure of his condition. I explained the necessity for operation to both the patient and his son. Dr. Roberts was then in Omaha and I advised waiting until he returned, and then that he be called in consultation. The first stone detected was the large one in the fundus, the second stone I am certain was in the middle zone of the bladder and the third was not found until the operation. The total weight of the calculi removed was about eleven drams, a considerable amount of material being lost with the fragments brought away by washing the bladder after the operation.

In regard to the symptoms, of course one of the best symptoms of stone is *stone,* but this gentleman presented none of the classical symptoms pointing toward stone in the bladder. While they might have been found sooner if his bladder had been examined, yet the doctor who failed to find stone is perhaps excusable for not having done so because of the fact that all the characteristic symptoms of stone were entirely wanting.

Of course the question arises whether there will be complete restoration of the powers of discharging urine. This is dependent upon the recovery of tone on part of the bladder. I believe that his frequent catheterization has preserved his bladder tone although he is nearly seventy years of age. I was more positive and more confident of this than was Dr. Roberts, and I believe he will recover his powers of urination. I was very much delighted last night to hear his son say that his father had passed some water and that he goes eight hours without emptying his bladder. My instructions were that when he began to feel like emptying his bladder, to place his hand upon the opening not allowing the urine to escape there and attempt if possible to establish a restoration of the normal flow. He, like a great many of our patients, wanted a guarantee of complete restoration, complete cure, etc., but he says to-day that if he does not recover his powers of urination, has to go through the balance of his life with a fistulous opening, he is extremely delighted that the operation has been performed.

Concerning the question of asepsis and antisepsis—if there ever was a case in which the work was done with extreme care, it was the operation in question. No one came in contact with the case except Dr. Roberts and myself, and we both cleansed ourselves most thoroughly and absolutely, instruments freshly sterilized, and every precaution taken, no towel even was allowed to be touched by any assistant, and yet twenty-four hours after the operation the patient had a tympanitic belly, great pain, temperature 90°, and we were naturally very much alarmed. However, it proved to be nothing more than ordinary flatulency of the bowels, which we learned the patient had been subject to before the operation. The man complained of nothing that would suggest the fact that he had had a capital operation performed upon him. The bladder was not seen in the operation, but in attempting removal of the largest stone the incision had to be slightly enlarged. The result in this case I am certain will demonstrate, as has been demonstrated so often, the value of absolute care in work of this kind.

CONTINUED REPORT.

I exhibited at the last meeting of this Society, a young man having a serpiginous chancroid on the penis and sore in the right groin. The patient called at my office to-day and the place in his groin was perhaps ⅛ of an inch in height, if anything a little longer than it was when I saw it two weeks ago, and certainly very much less promising in the matter of cure than it was when he was before the Society two weeks ago. He has had this trouble for more than a year, and to-day we seared the whole surface with electro-cautery. We seared the chancroid on the penis about a week ago; it is not much better. To day we treated it as I am treating some tuberculous glands of the face with creosote with the hope that we may get the local and specific action of the creosote on any tubercle bacilli that may be at work and keeping up this trouble. The young man in question is otherwise in good health, and the sore on the penis together with the one in the groin have existed for something over a year. They have resisted every possible mode of procedure in the matter of cure that we have employed, and we have tried almost everything.

DISCUSSION.

Dr. W. O. Roberts: In connection with this case, speaking of the long duration of chancroid: I saw one in a young man that existed for something over a year, and his penis was finally amputated, when complete recovery took place. Amputation was done under the impression that it was an epithelioma. I have another case now that has been in existence for eleven months. A considerable portion of the penis had been destroyed.

Don't.

Don't try to work on the editor's sympathies. If he is a good editor, he keeps his feelings in the background, and has an eye single to business. His duty is not to relieve distress or gratify individuals aspirations, but to entertain (and, if possible, sometimes instruct) his readers as well as he can. A magazine is not an eleemosynary institution.

Don't ask the editor to tear up or burn your article if he can't use it: decent people dislike to destroy other people's property. Don't fasten all your hopes on a single publication, when their are hundreds of them in the land: what is unavailable to one may suit another. Don't try to hold one person, or set of persons, responsible for the success or failure of your literary career.

Don't complain that the periodicals, while heartlessly rejecting your story, or sketch, or verses, have published hundreds that were worse. Perhaps they have; but when you come to conduct a magazine, you will find that one style of writing or thinking can't be made to cover all the ground, and that your individual taste must defer to that of the public.

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SATURDAY, SEPTEMBER 9TH, 1893.

EDITORIAL.

THE PAN-AMERICAN MEDICAL CONGRESS.

The current week has witnessed a gathering of scientific men which is of more than national interest and which is of first importance to medical science in the western hemisphere. Even the meeting of the International Congress, held in this country some years ago has been of less benefit to America than will be the results of this Pan-American Medical Congress. Without any disparagement of medical science abroad, American physicians have been too prone to overlook the superior merits of American medicine and surgery, and to meekly receive as having authority anything labelled imported and warranted genuine. Of recent years there has been a growing disposition on the part of the American profession to assert itself, and the Pan-American Congress has already served notice on our erstwhile teachers that we are no longer merely pupils but that we have acquired the ability and the resources, and are desirous of working side by side with them for the advancement of the science we are mutually devoted to.

To Dr. Chas. A. L. Reed, of Ohio, the General Secretary of the Congress, more than to any other individual is due the credit for originating and carrying to a successful outcome this meeting of scientists from all countries of the new world. By far the greatest burden of the undertaking has fallen upon his shoulders, and to his persistence, tact and indefatigable energy in overcoming obstacles, and arousing and sustaining interest in the project, the success of the Congress must be accredited.

Aside from the fact that this is the first time that medical men from all American nations have gathered in consultation, this Congress is remarkable for being the first medical convention on this continent which has been recognized and encouraged by financial aid by the national government. Congress appropriated $15,000 for the proper entertainment of foreign delegates. Invitations for foreign governments to send delegates were issued in the name of the President of the United States. Federal medical officers were detailed to act as delegates. Three hundred delegates were named by the governors of the states of the Union. Delegates were apppointed to represent various medical societies and associations, and finally every physician who could do so was urged to attend and take part in the proceedings of the Congress.

But one general session was held. Thereafter the work was divided between twenty-one distinct sections, each devoted to a specialty. Most valuable discussions occurred in every section but, under existing circumstances, the discussions of the section on marine, hygiene and quarantine will probably prove of the greatest interest to the public. This section, presided over by Surgeon-General Wyman of the Marine Hospital Service, who is also at the head of the National Quarantine Service, considered the question of epidemics, immigration and quarantine, and the relations thereto of governmental control and international regulation. The management and equipment of quarantine stations and methods of disinfection received full and careful attention.

Nearly one thousand papers were listed on the program, but many of these were not presented. The most valuable of these articles and discussions will appear in the REPORTER.

PRACTICAL QUARANTINE.

A year ago cholera was epidemic in Europe. This year, there is in Europe probably quite as much cholera, and it is spread over a wider area. Last year in the United States, the fear of an invasion of cholera amounted to almost a panic. This year there seems to be little public dread of the disease becoming epidemic. That the country has recovered from its alarm is largely due to the fact that the newspapers have other material with which to fill their columns by stirring up public apprehension over the business outlook.

The popular feeling of security arises from the fact that attention is not constantly and sensationally directed to the danger. But there is a real reduction of the danger of cholera invasion due to the enforcement of the national quarantine laws, enacted by Congress last February. It was fortunate for the country that the initiation of the new laws was intrusted to the Supervising Surgeon-General of the United States Marine Hospital Service, Dr. Wyman, who has so thoroughly and intelligently established the new order of things that if danger has been at all imminent it has been met and overcome without creating any public apprehension.

Briefly stated the law empowers the Supervising Surgeon-General United States Marine Hospital Service, to oversee all local quarantine authorities; to see that these are efficient and careful, and whenever in his discretion he deems it necessary, to supplement the local work or to take entire charge of it. Otherwise he is to merely advise with the local authorities—not to interfere with them.

Perhaps the most valuable provision of the law is that one which empowers this officer to send abroad to infected ports, assistants, who shall inspect all persons about to come to this country, and give to each a bill of health, without which no passenger can pass the quarantine line into this country. The assistants are officers of the Marine Hospital Service, and have been detailed to serve in the consular offices at Hamburg, Bremen, Rotterdam, Amsterdam, Antwerp, Southampton, Liverpool, Havre, Marseilles, Genoa and Naples,—the principal ports of emigration to this country. As Dr. Wyman has said: "This is a new departure in quarantine—quarantining in foreign lands—and the ultimate result may be looked for with great interest. Whatever the result may be, certain it is that the presence of these officers in European ports has diminished in a great degree the danger of the introduction of cholera and other diseases from those ports. Their relations, in one or two instances, were in danger of being strained, but this danger has been averted both by their tact and good judgment, and because of the all-powerful United States law, which practically says to foreign officials that should they object to the official acts of these officers, the alternate is the refusal of the bill of health and the cutting off of all commerce between their ports and the United States."

United States consuls in the interior are directed to notify consuls at port of the existence of contagious disease in their localities, or when merchandise or passengers are leaving any section within their respective consulates. Cable reports are sent to head-quarters.

At an infected port or coming from an infected locality, steerage passengers must remain under medical observation for at least five days and their personal effects must be disinfected by steam. Cabin passengers at infected ports, must give proof as to abode during the four days immediately preceding embarkation. If necessary they may be detained and their baggage disinfected. Certain articles of bedding, clothing and merchandise cannot be shipped from an infected port during the prevalance of an epidemic, nor for thirty days after it has been officially declared at an end. At all times rags must be disinfected before shipment to the United States.

When one embarks each emigrant is given a card containing certain information regarding himself and bearing a serial number referring to the manifest which is required by the immigration regulations and which contains fuller information regarding the holder. This card must be stamped at the consulate, again at the quarantine at the port of arrival, again at the immigration depot, and must be retained by the immigrant until he reaches his destination. These cards, together with labels upon the baggage, furnish valuable information to the health officers of the interior states.

The president has the right to restrict or prohibit the entrance of individuals or property coming from such places as he may designate, and to maintain the prohibition so long as by reason of the existence of contagious or infectious diseases in that locality he deems it necessary.

At ports of arrival in this country the precautions are as thorough as it has been possible to make them in the time elapsed since the law went into effect.

The great Canadian border which would seem to offer easy entrance for an epidemic is protected by the Canadian quarantine, which along the St. Lawrence River requires all emigrants, whether or not exposed to infection, to undergo examination at one of the quarantine stations, and to have all baggage disinfected. As a matter of courtesy, U. S. M. H. officers are stationed at Quebec for the purpose of inspecting, disinfecting and labelling baggage, and issuing certificates to immigrants to the United States.

This system, inaugurated and enforced with all the prompt, impartial carefulness, and the high degree of skill that characterizes the medical services of the national government, has thus far proved an efficient protection to the United States from the invasion of cholera. It would be wise to see how it would work when applied to yellow fever.

Don't take your pen in hand till you have something to say which is liable to interest a good many people, and don't be hasty or careless in your way of saying it.

TRANSLATIONS.

SYRINGOMYELIA ARTHROPATHIES.†

In *Le Progrés Med.*, April 29, 1893, Charcot reviews the various arthropathies dependent upon syringomyelia, and which are, as a rule difficult of diagnosis. In the evolution of these complications of locomotor ataxia, the tabetic arthropathies develop rapidly, frequently resulting in dislocations of the affected joints, and often preceeding the other symptoms. Charcot presents the history of a young man, 29 years of age, non-syphilitic, but the son of an alcoholic and grandson of an epileptic who was afflicted with destructive arthropathies of rapid development, having caused in a few days the dislocation of two large articulations. The question arises, are these joint troubles early symptoms of tabes, or in other words, are these tabetic arthropathies? It must be remembered that there is at least one condition in which the arthropathy of ataxia may be closely simulated even in its minuter details, and that is syringomyelia. In the course of this spinal affection may occur not only spontaneous fractures such as are seen frequently in tabetic patients, but also destructive arthropathies of rapid development, at times fondroyant and that appear to differ in no essential respect from tabetic arthropathies. A patient 32 years of age, a butcher by trade, when 25 years of age was affected with an extreme hypersensitiveness of the fingers (especially the points) which persisted for some days and then disappeared. The patient then commenced to complain of his limbs, the articulations of the lower limbs first and then of the upper becoming the seat of acute, rapid, lancinating pains causing him to cry out. These pains were entirely spontaneous. They were not produced nor influenced by movements of the joints, and the patient could use his joints without trouble. Sometimes one joint was affected, sometimes another, in the limbs, but never did the pains appear in the body of the limb nor in the trunk nor head. There was no swelling of the joints, no fever, no modification of the general health. This crisis lasted three months. In May, 1892, seven years after the first attack, the patient suffered from a new onset of acute pains. With this there was discovered a change in the right wrist which became swollen. A month later the right shoulder was found to be swollen, both swellings occurring without any pain. The swelling gradually disappeared, but a deformity occurred in the affected joints gradually becoming more marked. In the wrist there was a subluxation of the carpus towards the anterior face of the bone of the fore-arm. By drawing firmly upon the hand this could be reduced, and this without producing any painful sensation. The bony extremities were increased in volume and there was some crepitus. The soft parts were in a normal condition. The shoulder was equally deformed. There was excessive mobility and the humeral extremity could readily be dislocated under the coracoid apophysis. On palpation in the neighborhood of the elbow, two foreign bodies could be discovered; one appeared to be situated below the beak of the olecranon in the tendon of the triceps, independent of the articular extremities and perfectly mobile; the other, more voluminous, manifestedly seated in the thickness of the triceps muscle, elongated in form. This patient was afflicted not with tabes, but with syringomyelia.

As regards the pathological anatomy of syringomyelia it is characterized essentially by the formation of a cavity with gliomatious walls on the gray substance of the spinal cord. This lesion, which most particularly develops at the level of the cervical enlargement, invades step by step the anterior and posterior forms of the gray substance (polio-myelitic symptoms), finally destroying the white columns, lateral or posterior (leuko-myelitic symptoms). The most common clinical form of the disease is the progressive muscular atrophy, beginning at the thenar and hypothenar eminences with fibrillar tremors, which are the first to attract attention. This atrophy is generally accompanied by sensation troubles consisting mainly in more or less complete loss of sensibility to pain, heat and cold, the tactile sense and the muscular sense being preserved. A third group of symptoms corresponds to a series of cutaneous or sub-cutaneous lesions, bony or articular which are designated under the general name of trophic troubles; they include bullous eruptions, edemas, spontaneous fractures, and arthropathies. The latter are vegetating arthropathies, quite comparable to those which are seen in the hypertrophic form of tabetic articular lesions. These generally develop spontaneously, without any traumatic history; the onset is abrupt, at times fondroyant; without pain, without fever, the articulation and peri-articular soft parts rapidly tumify, the ligaments relax, the joint become loose, and dislocation occurs. On moving the joint crepitation may be elicited. The patients do not suffer. The articulations may be moved, palpated, dislocated without producing any discomfort. Contrary to the tabetic arthropathies which most frequently are situated in the lower limbs, (76 per cent. according to Schrotter), the syringomyelic arthropathies affect generally the articulations of the upper limbs (wrist, elbow, shoulder). At times they appear precisely in advance of the disease, but ordinarily, they are preceded or accompanied by other syringomyelic symptoms, trophic cutaneous troubles, thermo-analgesia, amyatrophy, etc.

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† Translated for The Medical and Surgical Reporter by W. A. N. Dorland, M. D.

From an anatomical point of view these may be distinguished as for the tabetic arthropathies, two varieties, the *atrophic* form, which is rare, and the *hyper-trophic* form which is most common. In the latter the ligaments and the capsule are elongated or destroyed and the bony extremities become movable to excess and loose and rattling. The articular surfaces eroded in places, become deformed either because of partial fractures that result, or because of the bony vegetations that surround them.

ABSTRACTS.

AMERICAN INEBRIATE ASYLUMS.

Dr. Crothers read an elaborate paper on this subject before the neurological section of the American Medical Association, June, 1893. The following is the closing part of the paper.

The most careful authorities of this country and Europe agree in the statement that fully one-third of all cases who come under treatment for periods of three months or more are permanently restored.

Other institutions, where inebriety is treated as a vice or by empirical methods, claim 80 and 90 per cent. of recoveries.

It is needless to add that all such statements are not supported by published statistics.

In view of the chronic character of these cases, and the imperfect means of treatment, the results so far are encouraging, and indicate great possibilities in the future from a better knowledge and control of these cases.

Such is an outline view of the history and present condition of asylums in this country. The rampant empiricism which is so prominent to-day is indirectly rousing up a new interest in all asylums for inebriates.

The increasing crowds of relapsed cases, whose faith in the gold cure specifics have been misplaced, are rapidly filling up all asylums, and come in a measure prepared to accept physical treatment, and to appreciate the needs of means and remedies. There are ideals of the coming means and appliances essential for the successful treatment of inebriety, towards which a few institutions are struggling. Each year's experience brings larger and clearer conceptions, and each institution is becoming more adapted for scientific work in this field.

An outline of the scientific treatment of inebriety in asylums in America will describe some part of the treatment common to each, but not yet attainable in its entirety, because of the numerous obstacles and want of support from public opinion and other conditions.

The situation of an asylum in the suburbs of a city or in the country near large centres, with ample grounds for retirement and quiet living, is essential. A proper building, equipped with baths and all the appliances for comfort, with means of amusement, joined with ample legal power to hold the patient a year or more, are equally essential.

They should be called hospitals, not only in full recognition of their physical disabilities, but as places where every condition of life can be regulated and every surrounding can be made to aid recovery and restraint. Literally, a quarantine hospital, where isolation and removal of all the exciting causes, combined with appropriate treatment, to build up and restore the deranged functional activities of the organism, can be obtained.

The time of treatment should be from six months to two years, and be governed by the condition of the patient, and extend to a legal control on parole for a long time after leaving the asylum.

In Connecticut the law gives control over all committed cases for three years, whether on parole or otherwise, in the limits of the State.

The hospital should provide exact military restraint, with duties and responsibilities, rewards and punishments, suited to the condition and capacity of the case; also work, amusement, and occupation, both mental with physical, as medicinal agents. Every condition of life should come under exact military control. Baths, exercise, sleep, food, and medicines, all to be regulated and applied uniformly. Each one should be treated as suffering from profound disease of the brain and nervous system, requiring long rest and building up. The general treatment should begin with an examination and enquiry of the facts concerning his past life and present condition. These conditions should be repeated every few weeks, because of the rapid changes and errors which are impossible to guard against in the first and other examinations. The use of spirits should generally be abandoned very early in the treatment, and the return of the drink paroxysm anticipated by the use of drugs, baths, exercises, and special control.

Many of the paroxysmal drinkers are practically epileptics and require similar treatment. They are suffering from grave disturbances of the physical centres, and physical remedies are required in addition to other means.

Other cases are delusional maniacs and paranoiacs, out of harmony with every condition of natural healthy living, and unable to correct and adjust themselves to such conditions. In others, nerve exhaustion is at the bottom of the drink impulse; inherited tendencies, reflex irritations, and many complex conditions which can only be discovered and treated in hospitals. When these are treated the causes are removed and the alcoholic soil is exhausted and dies away.

States of poisoning from stupor to full delirium are made the subject of special treatment, according to the experience and theories of the physician. These acute symptoms, followed by chronic conditions, require equally special remedies and means.

These are some of the general ideals in treatment to which every scientific asylum is moving. All asylums suffer for want of ample legal authority over their cases for sufficient time to secure permanent results. Public opinion regards asylums as of only temporary, and, in most cases, of doubtful value. But the theories of their work are openly termed "fads," and supposed to be founded on some mercenary or selfish purpose. The pulpit, press, and ultra reformers pass by on the other side, like the Levite. Public patronage is withheld, and most all asylums depend entirely on the income of patients for support. Hence, they are more or less crippled in every way. Many asylums suffer from poor location, bad buildings, and surroundings, inability to classify their inmates, and apply special treatment to each one. In many places baths and systematic exercise cannot be secured. The nutritive, hygienic, and physical treatment cannot be carried out on the ideals of the managers; hence, many asylums are using the means within their power, in anticipation and looking forward for larger and more perfect facilities.

The treatment of inebriety not only includes everything found valuable in hospitals for the insane, in reformatories of the most advanced type, and in the modern sanitarian and homes for neurasthenics. The essentials for treatments in each of these classes are required for the inebriate. The asylum managed on the scientific plan of providing for the requirements of each case must have the power of control, and special buildings given to the hospitals for the insane; the discipline and management of the modern reformatory and the appliances of the best sanitariums and private homes; then it can approximate to a measure of success in the treatment that at present is only an outline. American asylums are leading the world in these directions of practical work, and while no one has combined only in the crudest way these appliances, many asylums are approaching it yearly. Asylums all over the world are at the beginning and infancy of their existence. A great deal of preparatory work must be done before they can reach the first stage of scientific work. The moral remedies by appeals to the will power and morals of the case must pass away. The delusion and palsy of the higher brain centres must be recognized, and dissolutions beginning in the ethical centres extending down to all the lower faculties must be studied. The great fog banks of metaphysical theories of free will, moral depravity, vice, and wickedness must disappear from all conceptions of inebriety, and its practical management in asylums. Asylums and managers who act on the theory that the inebriate is half-wicked and half-sick are crippled. Asylums and managers who attempt by drugs or moral appeals to restore and cure the victim are still far back in the stage of credulity. The specific vaunter, who professes to break up the the symptom for drink, as if it was the disease itself, is an empiric, either ignorant or by design. Asylums and managers who teach dogmatically the nature of inebriety and its only true remedies are not very far along in their scientific work. Asylums who claim large percentages of cures from certain means and remedies are not worthy or confidence.

Inebriety is found, when carefully studied, to be the most complex neurosis of modern research, dependent on heredity and many physical causes, also physical condition and environment, that are not clear to the most minute study. Asylums for treatment so far, by isolating the patient, places him in the best condition for study of conditions and applying means for relief.

The more thorough this study, the wider the range of causes appear, together with the means and methods of relief. The most advanced asylum of to-day follows a general prospective plan of treatment and has no specifics or no special theories that are not open to change and readjustment, besides a few general facts, which stand out like mountain peaks in a new land, all the intervening space is unexplored. No one can speak dogmatically as to where inebriety begins, and what the exact causes may be. No one can explain the varied phenomena of drink storms, of the action of spirits on the physical brain, of the power of hereditary, of the brain condition which demands relief by the craving for neurotics, of the sudden cessation of this drink impulse, under unusual circumstances, of its equally sudden outburst from causes unknown. Even in asylums the same uncertainty exists. Cases that seem restored, relapse, and others that are considered incurable become restored, showing that our present knowledge is very imperfect, and the known is comparatively nothing in contrast with the unknown.

Running through all this phenomena of inebriety is an outline of a uniform movement of cause and effect; of events following each other according to some law; good examples are the periodicities of the drink impulses, and the outbreak of such impulses from the presence of certain conditions that can be foreseen and studied. Patients under care in asylums present a remarkable uniformity of symptoms and progress that is often startling to the student. Not unfrequently such cases can be anticipated and the results of treatment known far in advance. The drink symptom is dependent on some conditions of brain degenerations and changes. It will suddenly die out and disappear under the most adverse conditions and surroundings. Examples are numerous of persons who become temperate, sign pledges, and stop all use of spirits under the most favorable circumstances. Fvery temperance and revival meeting furnish illustrations of persons who are restored permanently, although the same means have been used many times before with no result.

Persons are known to stop drinking from the slightest supposed reasons, and in all these cases the last means used are credited with being the active cause.

The true explanation in all these cases is that some change or evolution of brain function has occurred and the drink system has died out.

It is not the last prayer, pledge, or solicitation of others, or the last drug or remedy of special means used that has caused this change. Other and more obscure causes are at work, and the time comes when their action is apparent in the cessation of the drink impulse. Physicians in charge of asylums recognize this fact, and realize that their best efforts are in building up the brain and nervous system, and placing the organism in the best possible condition for both organic and functional change.

Remedies directed to the drink symptom are never curative; a dose of mercury acting on the liver is a more rational method than bromide to check the drink impulse.

Asylum study of these cases show that inebriety is often a symptom or phase of a neurosis which may break out and change to some other form. General paralysis, melancholy, and many forms of insanity, together with tuberculosis, and various neurotic affections follow frequently on the subsidence of the drink craze.

The statement, that the gold cure specifics are followed by an increased number of insane among those who have used the treatment must be a literal fact. The proof of such a statement is found in the experience of every asylum, and the general principles of neurotic diseases. The number of such persons cannot be easily determined, but the more powerful the narcotic used to stop the drink symptoms, the more certain insanity and profound degenerations of the brain centres will follow.

All asylums for inebriates suffer from the large number of incurable inmates, persons who, after an uncertain course of treatment, go away, relapse and condemn the asylum for their failure. Much of the current opinion concerning asylums is formed by the irresponsible statements of incurables. Such persons seem to take pleasure in denouncing asylums in every place, and boasting of the intrigues of its inmates. On the other hand, persons who have received substantial benefit conceal all reference to their treatment and residence in an asylum.

The result is that all institutions are judged by the unthinking public from the statements of those who have failed to receive any benefit from its work.

Unthinking physicians who suppose that the control of the drink craze is the central object of treatment often lend their influence to unfavorable criticism of asylum work. This, joined with bitter condemnations of moralists, complicates and increases the difficulties of every practical asylum trying to understand scientifically this new field of medicine.

American asylums have many advantages over all foreign institutions, in freedom from caste and prestige; also in ability to follow independent lines of work and rise above the prejudices and opposition of those who dread change and advance. Some general conclusions may be stated, as follows:

1. The asylum care and treatment of inebriates began first in this country, and has grown and extended to all civilized nations of the world.

2. American asylums have developed the disease theory and the practical character of physical treatment in institutions beyond that of any others in this field.

3. Asylums in this country represent nearly all stages of development and early growth, from infancy and childhood, with its feeble conceptions and infantile efforts, to the boastful assumption and over confidence of youth, on to the dawning truth of early manhood, when reason and judgment begin to reign.

4. A few of these asylums discern some great outline truths which may be stated with confidence as ideals towards which there is a rapid movement.

5. Inebriate hospitals must take the place of jails and station-houses. Such places are dangerous in their mental and physical surroundings by intensifying the degeneration and removing the patient beyond hope of recovery. They are in many cases literal training stations for mustering armies of chronic maniacs that never desert or leave the ranks until crushed out forever.

6. Inebriate hospitals should receive the incurable inebriates and make them self-supporting, and build them up physically and mentally. They would relieve

the tax-payer and relieve society of untold burdens of sorrow and misery.

7. Inebriate hospitals should receive the recent cases and place them in the highest condition of enforced health and vigor, and thus return a large number to health and sobriety again.

8. Inebriate hospitals can be self-supporting when once established. They should be managed on scientific business principles, like military training schools.

9. Inebriate hospitals should be built from money raised by taxes on the sale of spirits, on the principle that every business should be obliged to provide for the accidents which grow out of it.

10. These are the realities which every inebriate hospital is approaching and which all experience points out as practical and literal in the near future.

11. The enebriate hospitals of to-day are only in the infancy of their work, contending with great opposition and prejudice, misunderstood, condemned, and working against innumerable obstacles.

12. Lastly, there is an intense personality in inebriate hospitals to each one of us. They may bring salvation and restoration to some one near and dear. They may be fountains of healing whose influence shall cross and influence our pathway in many ways.

13. Inebriate hospitals and their work are the great new lands which only a few settlers have reached. They are calling to us to come up and occupy, and thus help the race on in the great march from the lower to the higher.—*Quarterly Journal of Inebriety.*

Ectopic Gestation in Both Tubes.

Walter reports a case of tubal gestation in which both tubes were gravid. On opening the peritoneum there was a discharge of fatty blood with clots. The uterus was enlarged; there was a tense cystic swelling, a little larger than a Tangerine orange, felt in the ligament, and a similar one to the right side and behind the uterus. The tumor on the right side proved to be the right Fallopian tube distended with blood. The left mass was found to present in its outer extremity a tear, exposing a firm blood-clot; this was occupied by an apoplectic ovum and tubal mole. The amniotic cavity presented an embryo six centimetres (2½ inches) in length; this was so thoroughly saturated with blood that it resembled in color the clot by which it was surrounded. In the right tube the ostium was found completely occluded, its walls intact. In cutting into the mass, it was found occupied by a tubal mole. The amniotic cavity persisted, but no embryo was detected. The wall of the tube and the mole were hardened, and in due course embedded and sectioned for the microscope. Chorionic villi were found in clusters, which demonstrated beyond any doubt that the organized clot in the right tube was a tubal mole. The pregnancy in the left tube was more advanced than in the right. It is impossible to determine whether the pregnancies occurred at the same time,—the one becoming apoplectic and ceasing to grow, or whether it occurred at a latter period.—*British Medical Journal.*

Double Pyosalpinx.

Butler Smyth reports double pyosalpinx, in a woman 26 years of age, in which there was a large, elongated swelling centrally situated, which reached to the umbilicus. This was movable from side to side, but not tender to the touch. The uterus was pushed in front of the tumor, and was distinctly recognized through the abdominal walls. The lower part of the tumor was found in Douglas's pouch. On the left side of the uterus was another fixed swelling, filling the pelvis on that side. The tumors were closely adherent to intestines and omentum, rendering the separation difficult and tedious. They were removed without rupture; which seems to be the preferable plan, rather than to remove the contents by aspiration, as, when the tumor is once emptied, its landmarks are destroyed and the difficulty of the operation increased. In separating a tumor, use the pulp of the finger as much as possible, and thus endeavor to prevent its laceration and rupture. The patient recovered.—*The Lancet*

Don't "give it up" because a particular contribution is declined. As you may learn from the circular which all well-conducted magazines send out in such cases, its non-acceptance may be dictated by considerations irrespective of its intrinsic merit or your ability. A second, or a twentieth, shot may hit the mark which others have missed.

CURRENT LITERATURE REVIEWED.

THE AMERICAN JOURNAL OF OBSTETRICS.

for August.

Dr. Christian Fenger contributes a paper on

Appendicitis,

In which the whole question is thoroughly considered and the recent literature on the subject carefully reviewed. The author reports several cases and the paper which was read before the Gynecological Society of Chicago, is illustrated with several wood-cuts of specimens removed. The advice is given to operate, first, on all cases accompanied by general or diffuse peritonitis; secondly, to operate upon the cases wherever a tumor exists in the region of the appendix, which steadily though slowly increases after the first four or five days of its discovery; lastly, to operate upon the cases that are known as cases of recurrent appendicitis, providing such attacks give signs of gravity.

Dr. Fernand Henrotin discusses

Enterostomy and Drainage in the Treatment of Diffuse Septic Peritonitis.

In a short article read as part of the discussion of Dr. Fenger's paper, he emphasizes the point that in severe general diffuse septic peritonitis with tympanites, from whatever cause, the chances of recovery will be enhanced if two openings are made, one to drain the peritoneal cavity, and the other, an artificial anus, to relieve the distention.

Dr. Edward Sanders presents a paper on "Chronic Oophoritis and its Treatment by Electricity." The paper presents the conditions of life and other causes of the disease and will be continued in the next issue of the journal.

Dr. Robert A. Murray furnishes a

Clinical Report of Cases of Pyosalpinx, treated by Uterine Drainage, with Subsequent Conception.

As a result of the cases observed, he presents the following conclusions:

1. That many cases of pyosalpinx are curable without mutilating operations, if the endometritis be treated by curettage and drainage with strict antiseptic precautions.
2. That true drainage of a pyosalpinx into the uterus is possible and does occur when the tubes and ovaries are on a level with the uterus, and the uterine end of the Fallopian tube is patulous, or can be made so by treating the uterus.
3. That uterine curettage and drainage should be practiced in every case before operation, unless the tubes are very distended and thin, to cure the endometritis, which may and often is a cause of trouble and lack of relief after celiotomy and removal of the organs is performed.
4. That, even after pyosalpinx, frequently the tubes and ovaries are not useless organs, the proof being that pregnancy occurs and the puerperium is normal.
5. That only after proper treatment, the tubes, ovaries, and uterus remaining bound down by adhesions and a menace to life and health, should the radical operation be done.
6. As a matter of observation in large maternities, there are very few cases of puerperal complication due to the presence or results of a former pyosalpinx.

Dr. H. W. Foster reports a "Successful Case of Cæsarean Section."

Dr. Grace Peckham Murray contributes a paper on "Hematoma of the Vulva, with report of a case." The paper is illustrated with an excellent colored lithograph of the existing conditions.

Other papers in this issue are "The Value of Treatment in Pelvic Disease," by Dr. Frieda E. Lippert; "By what Authority are Resections of the Fallopian tubes and Ovaries and the Enucleation of Myomata characterized as 'Surgical Amusement?'" by Dr. A. Martin, of Berlin.

THE CHICAGO MEDICAL RECORDER

for August.

Dr. Edward Wyllys Andrews contributes a paper entitled

Further Experience with a New Treatment of Hemorrhoids

in which he advocates electro-puncture of the pile. In his first experiments he used a hypodermic needle for the double purpose of injecting cocaine and applying electricity to the tumor.

The present form of instrument contains no provision for injecting cocaine, but could be so arranged by making one of the needles hollow. The destructive action of the current very rapidly corrodes any but a platinum needle, and by using fine dental broaches he obtained almost entirely painless puncture. The hollow needle is so much larger as itself to be a little more likely to cause pain. My experience is yet too limited to determine whether it will be better to rely only on external applications of cocaine. So far I have had little or no pain with the broaches. They corrode very fast, and must be renewed. Theoretically a fine copper electrode would be desirable, as shown by the hardening and penetrating action of the copper salts with the uterine electrode.

He has found this method a pleasant and efficient substitute for the hppodermic treatment. On theoretical grounds, he feels warranted in claiming that it will prove safe, and that the cures will be permanent. Should clinical experience develop no cases of embolism, or other dangerous complications, he believes the method can do what the hypodermic method has failed to accomplish in superseding all operative measures requiring anæsthetics and confinement to bed.

The author includes in his paper the report of a number of cases in which he used the method. He stated that it is not adapted to those cases in which there has been long continued irritation and much resulting hyperplasia. One feature of the electrolysis is the abatement of pain which the author states has followed the electrolytic treatment.

Other articles in this month's issue are an illustrated paper on "Tait's Perineal Flap Operation," by Dr. F. Byron Robinson; "A Consideration of the Traumatic Neuroses," so-called by Dr. Harold N. Moyer; an interesting account of the "Condition of Siberian Lepers and the Means for their Relief," by Kate Marsden; and "The Leprosy Problem," by Dr. William Allen Pusey.

PERISCOPE.

SURGERY.

Treatment of Pulsating Pleurisy and Pneumorthorax.

Ernest Rowell Watkins, of Notingham, has practiced paracentesis of the chest in cases of pulsating pleurisy and pneumothorax with good effect. In the case of a girl 18 years old, who had strained herself by lifting a box, there was a sensation of something having given way and pain in the side and back. After various measures of treatment a distinct pulsation or heaving was noticed in the thoracic parietes, and the hand, when placed on the left side, was forcibly lifted at each pulsation. Ten ounces of pus were removed from below the inferior angle of the left scapula, and a drainage-tube inserted with ultimate complete relief.

Another case, a clerk aged 26, had "wrenched his insidies" and the pains were referred to the left side. Signs of great intra-thoracic pressure followed, and the left side was distended, with the heart pressed over to the right. The chest was punctured and a quantity of air came away with twelve ounces of fluid. From this time the patient improved, and the breath-sounds could be distinctly heard back and front.—*Lancet.*

Estlander's Operation in Empyema.

Sir William Stokes, in treating of the conditions under which empyema is developed, states that the results of the experience derived from the cases operated on in Dublin would tend to show that ultimately Estlander's operation will be deemed applicable to a much larger range of cases than at present. He considered it an important matter to determine the point where the opening into the cavity of the pleura should be. He thinks that situated over the ninth rib, recommended by Godlee, is perilously near the diaphragm. He approved of flushing the pleura both during and subsequent to the operation.

In discussing the views of Stokes, it was stated by Heuston that Estlander's operation was required only in cases of very long standing, where there was a space which could not be occluded unless the chest-wall were allowed to adapt itself to the collapsed lung. He turned the flap of periosteum over the end of the rib, where it had been cut across, and this hindered the absorption of the discharge by the cancellated bony tissue, and thus avoided pyæmia.—*Dublin Journal of Medical Science.*

An Interesting Case of Empyema.

Barlow reports an interesting case of empyema in his service in the children's ward of the University College Hospital. A boy, aged 11 months, had suffered with a bad throat, with swelling of the neck, discharge from the nose, and trouble of his ears. He was admitted into the hospital with a temperature of 104° F., uttering short cries, breathing quickly, and catching his breath, —indications of pneumonia. The upper two-thirds of the right lung were dull, with bronchial breathing and bronchophonic resonance, and the rest of the side gave defective resonance, with weak breath-sound.

A large hypodermatic needle was inserted near the angle of the right scapula, and soon this fluid withdrawn. Under the microscope many pus-cells were seen, and afterwards the presence of micrococci, diplococci, and a few small chains were found. Two days subsequently a free opening was made into the chest, with the removal of a small piece of the ninth rib, and then seven ounces of fluid escaped, and five days latter shaggy lymph came out.—*The Clinical Journal.*

Surgery of the Thorax.

Rickman J. Godlee, of Bromptom, England, in an address before the British Medical Association, presents points of interest on the surgery of the thorax. As to the site of election for incision in empyema, no position is so good, in his opinion, as that opposite the ninth rib, just outside the angle of the scapula. If the chest be very full, a good plan is to place the patient well over on the diseased side, semi-prone, in fact. It will then be found quite easy to reach the ninth rib outside the scapular line by standing behind. The time of removing the tube depends upon the amount and character of the discharge. If the tube should have slipped in through an anterior opening, the original opening should first be enlarged; and, if not found, it may be necessary to make a posterior incision for its removal.

Double empyema is not so rare as might be supposed. The greater number of pulmonary abscesses encountered by him are bronchiectases, and the treatment has not been very successful.—*The British Medical Journal.*

A Case of Traumatic Hernia of the Lung.

E. Massart, of Honfleur, records a case of traumatic hernia of the lung. It occurred in a robust, healthy man, 38 years of age, as the result of a stab wound in the seventh left intercostal space, a little behind the anterior axillary line. The protruding lung former, a swelling in the wound of the size of half a hen's egg; it was smooth, of a rosy color irreducible, crepitating under the finger, and not altered in size by the movements of respiration. The wound had occurred fourteen hours before seen, and the patient complained of severe pain in the part, and his respiration was short, rapid, and embarrased. The base of the tumor was transfixed with a needle carrying a double strand of catgut, with which it was tied in two pieces. The projecting mass was then cut away and the stump was reduced into the pleural cavity. The external wound was closed and rigid antiseptic treatment carried out. The man made an excellent recovery, without either pleurisy or pneumonia.—*The Lancet.*

Antiseptic Intro-pleural Injection.

Sarbony has employed antiseptic intrapleural injection for the treatment of thickening of the pleura with marked benefit. He uses an injection of 20 grammes (5 drachms) of liquor of Van Swieten in acute pleurisy after performing thoracentesis. In sero-fibrinous pleurisies the same method has been attended with remarkably good results In purulent and encysted pleurisies, and in cases where resolution or absorption cannot be expected, this form of injection is advised.

Another injection has been employed, consisting of iodine 1 gramme (15 grains), iodide of potash 4 grammes (1 drachm), distilled water 35 grammes (9 drachms), which is used daily and continued for eight or ten days. But this is not attended with such satisfactory effects, in the arrest of the pleural trouble, as the injection of Van Swieten's liquor in quantities ranging from 5 to 35 grammes (1¼ to 9 drachms).—*Journal de medecine et de chirurgie pratiques.*

Intra-pulmonary Injections in Pulmonary Tuberculosis.

Gallet condemns the surgical treatment of pulmonary tuberculosis, and objects to antiseptic washes or injection into the parenchyma of the lung, considering them not only useless but dangerous measures.—*La Partique medicale.*

Purulent Pleurisy Opening in the Lumbar Region.

Dubreuilh, of Montpellier Hospital, r a case of purulent pleurisy opening in the lumbar region. A young man presented an emypema, which migrated to the ileocostal space on the left side, and the lumbar abscess was opened by an incision one and one-half centimetres (⅝ inch) in length, discharging a litre (quart) of sero-sanguinolent fluid. It was washed out with boric-acid solution and packed with gauze.—*Gazette medicale de Paris.*

Excision of an Hydatid Cyst of the Lung

Delageniere reports a successful case of this character. A large opening in the chest-wall was made, and a portion of the sixth, seventh, and eight ribs was resected; the cyst was then stripped away.—*La Semaine Medicale.*

GYNECOLOGY.

Premature Sexual Development.

J. Halliday Croom classifies premature sexual development in relation to ovarian tumors, under the following heads: I. Precocious menstruation with early appearance of the external manifestations of puberty. 2. Sexual development without menstruation. 3. Menstruation previous to the development of the sexual organs. 4. Early conception and pregnancy. 5. Premature sexual development associated with tumors of the generative organs.

Of the first class the most striking illustration is the frequently quoted one of de Beau (*American Medical Journal*, vol xi). The individual was born December 31, 1829, with mammæ perfectly formed and mons veneris covered with hair similar to a girl 12 or 14 years old. The catamenia appeared when she was three years old, and continued regularly every month as copious as in a woman. Each period lasted four days. The dimensions of her pelvis were such as would have permitted her to bear children at three years of age. The second class of cases are infrequent. Among the instances that have been mentioned is one by Cook, in "Medico-Chirurgical Transactions" for 1813. The patient was born in 1802; the external pudenda became prominent and covered with a quantity of dark hair when she was 4 years of age. Within four months of her death, in 1809, she began to suffer from convulsions, after which she increased enormously in weight; complexion became florid, cheeks downy, and lips covered with so much hair that she might be said to have a beard. Her voice, formerly shrill, became strong, and the whole contour was that of puberty, except the breasts and general stature; the mons veneris and labia pudenda were as at perfect puberty, covered with long black hair. Menstruation did not occur, and post-mortem examination showed no change in the external organs of generation. Neither ovaries nor uterus were increased in size. Third: menstruation without development of the sexual organs is less unusual than the preceding, but is also rare. Pozzi alludes to the case of Bernard in the *Lyon medical*, 1887, of a girl who had menstruated regularly from birth up to 12 years of age without any development of the external organs. Fourth: numbers of cases of early pregnancy have been reported by trustworthy authorities. Muller, in the "Cyclopædia of Obstetrics and Gynecology," reported a case of a girl who menstruated at the second year and was pregnant in her eighth. Fifth, in tumors previous to sexual development, upon which this paper is founded, is the case of Forsythe: a child 7 years of age suffered from a large abdominal tumor. Previous to March, the present year, she had been perfectly well, without abnormal symptoms. In this month she was raped by a boy on several occasions, immediately after which she had a profuse discharge from the vagina, which continued almost uninterrupted until admission to the hospital, several months later; shortly after the rape the abdomen began to swell and gradually enlarged, until, on admission to the ward, she had a tumor about the size of a seven months' pregnancy. It was supposed that this was pregnancy, notwithstanding her extreme youth. This was apparently confirmed by the development of the mammæ well-marked linea nigra, copious development of hair over the mons veneris, and a well-marked bruit was heard. The tumor was freely movable, tense, firm, and had apparently no intimate connection with the pelvis. The mobility and absolute solidity decided against the possibility of pregnancy. The patient was carefully examined under an anæsthetic; the remains of the hymen found thick, completely penetrated; vaginal walls smooth; cervix enlarged, soft, and patulous. The uterus was found to be slightly enlarged, over three inches in length. Manipulation caused free hemorrhage. It was supposed to be a sacculated ovarian tumor. An operation was performed on November 25th. The tumor was aspirated, but only a small quantity of sero-sanguineous fluid withdrawn; had no adhesions; was perfectly free in every direction. Abdominal incision had to be enlarged within an inch and a half of the ensiform cartilage, owing to the fact that the tumor was incompressible. It was removed, and found attached to the left side of the pelvis by a long pedicle. The Fallopian tube was greatly distended and tortuous, the opposite ovary small and undeveloped; the uterus was enlarged, corresponding with the dimensions indicated by the sound previous to the operation. The tumor weighed over six pounds.—*Edinburgh Medical Jnurnal*, February, 1893.

Ovariotomy with Pregancy.

Fancourt Barnes, of London, reports the removal of a multilocular ovarian cyst in which there were adhesions of intestine to almost the whole surface of the cyst and the intestines in a state of acute congestion. The tumor was found to spring from the left side of the uterus. which was enlarged about the size of a four months' pregnancy. The abdomen was washed out with clean, warm water and the wound closed with silver sutures. The patient recovered without interruption of the pregnancy.—*British Gynecological Journal.*

Pyosalpinx Opening into the Rectum.

Veit reports two cases of pyosalpinx communicating with the rectum. The first patient had stricture of the rectum close to the site of the perforation. The suppurating tube was removed and the opening in the rectum sutured. Sterilized gauze was introduced into the abdominial wound for drainage. The patient died, seven months later, of phthisis. The second patient had repeated attacks of pelvic peritonitis. Operation was repeatedly deferred; the tubes were distended, and were removed, and the perforation of the bowel found after careful search. The patient died from obscure symptoms, when a circumscribed peritonitis was found in the pelvis,—an encapsulated cavity, which formed a communication with the rectum by a narrow, tortuous, fistulous tract. Veit thinks that this case would have been saved by drainage.—*British Medical Journal*

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ORIGINAL ARTICLES.

SOME CONSIDERATIONS ON THE THERAPEUTICS OF DIABETES MELLITUS.

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A great many observations on the nature and therapeutics of diabetes mellitus have been collected during the last few years. While in former times it has been thought that those suffering from this disease where of necessity incurable, or in other words, almost candidates for death, a belief has gained ground recently that even this illness can be treated successfully, or with such results that the prognosis need not be necessarily a grave one. Cases of diabetes mellitus may be cured under attentive treatment provided that both physician and patient co-operate,and in no disease is the co-operation of the patient of such importance. From the very nature of the disease it is readily understood that dietetic measures are absolutely necessary to successful treatment; and as the physician can only give indications as to the food to be partaken of, much will depend on how the patient carries out his medical advisers orders and how he obeys the rules laid down for his observance. Of course, the physician also will have to pay close attention to such cases; a slip in the management of a case will often do sufficient harm to cause endless trouble. So long as patients desire to live according to their own ideas and so long as they intend to enjoy such things as they may like, just that long no success is to be hoped for in the treatment of diabetes,and the physician will do much better to leave such cases alone, especially after the gravity of the disease has been duly explained to the patient and after he has been informed that a disease so severe in character as diabetes mellitus cannot be cured by the convenient exhibition of a few pills or a pleasant draught.

Regarding the practical therapeutics of this disease, it should be first considered what object such a treatment should have in view,and what means are at our command to relieve the symptoms and finally, if possible, bring about a cure. The ultimate results to be avoided, or in other words, the direct cause of the lethal end of diabetes may be classed within four divisions:

1. General marasmus, on which some acute disease supervenes and which causes death within a short time—a weakening of the constitution which does not permit the supervening disease to take its way towards recovery. The acute supervening disease may be of the most common nature, as pneumonia or typhoid fever, and does not have its origin at all in the diabetic state; it is to be regarded in the light of an acute complication.

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2. Diabetic coma, caused by the diabetic state, or coma caused by some supervening disease.

3. Changes within the vessels and large organs, caused or favored by the diabetic state, such as nephritis, fatty degeneration of the heart, or changes within the arterial walls leading to apoplexy.

4. Gangrene, either in consequence of wounds or injuries, or within the lungs, caused and favored by the diabetic state.

The object of treatment would be, according to this;

1. To relieve the diabetic state as much as possible, the only means to attain this being the use of a proper diet.

2. To use such therapeutic and hygienic measures as will prevent the occurence of intervening disease and relieve it when already existing.

It is hardly necessary to state that as not all diabetics will fail from the causes above mentioned, it requires somewhat of a diagnostic experience as to the measures to be taken in individual cases. Of course, an anti-diabetic diet should be used in all cases, however light or severe; but as to the proper hygienic methods or drugs to be employed, much latitude can be allowed and much will depend on the individual abilities of the physician. Many will get along without drugs, others must have such functions as are lagging or disturbed restored to proper activity, while in still others the most importance must be given to hygiene.

Generally speaking, diabetics may be arranged under two classes: 1. Those in whom by the observance of a proper diet the sugar in the urine will disappear entirely while such a diet is strictly observed, and in whom after the disappearance it will not return quickly or in very large proportion; 2. Those in whom the sugar in the urine does not disappear even if the strictest diet is observed and most stringent therapeutic measures taken. The former can be called the mild form, the latter the severe form. We assume that in the milder form the sugar is formed in the blood (resp-urine) only after the ingestion of carbo-hydrates, while in the severer form the sugar is also derived from the albuminates. Cases of the latter kind have been observed when the too liberal ingestion of albumen in any form increased the percentage of sugar contained in the urine. It can readily be seen, by the very classification, that there must be a difference in the treatment of the two classes. While a large number of mixed forms also exist, which cannot be classified under either heading, it can be ascertained by repeated examination of the urine, by the observance of a special strict diet, by the general character of the disease presenting itself in the patient, whether the relatively favorable prognosis of the milder form of the disease can be given.

Regarding anti-diabetic diet in general it is noticeable that almost every close observer has his own preferences and of course much difference exists according to the class of cases observed. The strictest diet is perhaps prescribed by Cautain. He permits only meat and fish, no food with even a suspicion of starchy matter, no butter or other fats, no wines; none of those little additions which act as a sort of make believes to the always objecting patient; others are milder in their orders. Naunyn, Ebstein, Pavy, Harley, and many others furnish special tables for the diet to be given in these cases. The main point of all diets, however, no matter how strict or how lax, is this: Daily examination of the urine, with quantitative estimation of sugar, and as soon as an increase or no decrease is noted, back to as strict a diet as the patient will bear. Weekly or biweekly weighing should not be forgotten. In all cases it should also be remembered that the quantity of food, even if only animal nourishment or albuminoids are taken, must not be lost sight of. Cases have been noticed, where the urine was free from sugar on the ingestion of a moderate amount of meat, while when an excessive amount was taken, the urine contained sugar. This is also a further proof of the statement that sugar may be generated in a purely albuminoid diet.

Now to get to the practical side of the diet. It is very easy to prescribe for a patient a restricted diet, furnishing him at the same time a statement of what he may eat and what not. I have found a better plan to map out a diet table extending over a whole week, including every day in the week and prescribing the exact kind of food which should be consumed at a meal, and incidentally I have found that under those circumstances a patient will be much more apt to carry out instructions than when the whole arrangement is left to himself. Of course, he should be furnished with an outline of the treatment, so that he himself may intelligently understand the why and wherefore of the different measures, and thus will the importance of his carrying out his instructions be impressed upon his mind. It is also much easier to revise a diet table occasionally and the patient himself can be furnished with a substitute list, which will answer in case the articles originally ordered may through uncontrollable circumstances not be obtained or pall on his stomach. Additions to the table are easily made and the effect on the system can be ascertained without difficulty. Another point in favor of this procedure. It is a self-acting check on the patient, as the daily examination of the urine will always show any transgression from the permitted diet and the excuse of similarity between different articles of diet so often offered will not hold good.

In the preparation of this kind of a diet table the ability of the physician as a gourmand will often be taxed to the utmost. I maintain that it is possible to please almost every one in the subject of a restricted diet, provided one has the proper culinary resources as well as proper assistance, and further, the good-will of the patient. No less an authority than Billroth has remarked that a physician should be as well versed in the kitchen—or in other words, in dietary affairs, as he should be in general practice.

I offer for consideration the following two diet tables : The first one a restricted dietary for the milder cases of diabetes, in which there is a prospect of subduing the disease by adherence to the orthodox strict diet, even if it has to be persisted in for a long time. The second is for cases in which the diet prescribed in the first table has failed and which may therefore be put down as belonging to the aggravated form, in which the main point must be put on the maintenance of vitality and strength and not on the diminution of the sugar. At the same time it has been made an object not to offer any more nourishment containing sugar or its controvertibles than is necessary for the purpose, and much weight has been put upon the fact that food somewhat filling in nature avoids frequency in full meals. See tables p. 432-33.

The tables are intended for patients of ordinary means; of course, they could be largely improved for wealthy patients; for instance, poultry and game of various kinds can be added just according to the means of the patient, likewise vegetables not ordinarily obtainable. Here, in our part of the country, we can obtain the vegetables marked down in the above dietary for at least nine months in the year at a very moderate price and the balance of the time at a not extravagant one. The individuality of the patient is also to be considered and much diversion may or may not be obtained according to his individual tastes. Regarding vegetables, a difference of opinion exists among authors. While many will not assist in diminishing the sugar, still they contribute to diversify the diet and make it more bearable, and not do positive harm. There is no necessity for such strictness when equal results can be attained with less severe measures. The alkaline waters may also be used as table waters and will assist in bringing about a better condition. Koumyss, wherever obtainable, can be substituted for the second breakfast and afternoon lunch with advantage. In this connection it should be mentioned that the Koumyss tablets, now to be had everywhere, will facilitate largely the home manufacture of Koumyss and render its employment cheaper for people with rather limited means.

In the tables above given chocolate and cocoa are also ordered; they should be perfectly free from starch and sugar; such preparations can be had in the ordinary channels of trade. Saccharine can be used to sweeten as a substitute for sugar. It is best for this purpose to order a solution of saccharine in alcohol, say about one grain to one drachm, or to use tablets of saccharine one-fourth grain and mounite q. s. The former can be used in half or whole teaspoonful doses, equal to one-half or one ounce of ordinary cane sugar. The latter from one to four tablets at a time. This will cause almost excessive sweetness already, but if more should be desired, further addition would still be harmless.

FIRST TABLE.

If after one or two weeks' trial the Urine contains only a small amount of sugar, say ½ per cent., strike out all vegetables and insist upon the reduced diet for two more weeks.

	SUNDAY.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Breakfast, 7 A.M.	Broiled Chicken. Coffee. Eggs.	Ham or Bacon with Scrambled Eggs. Coffee.	Ham and Eggs. Lettuce. Coffee or Cocoa.	Poached Eggs. Fried Ham. Coffee.	Oranges. Tenderloin Steak with Mushrooms. Coffee.	Broiled Fresh Herring or Smelts. Fried Eggs. Coffee.	Mutton Chops. Radishes. Coffee or Cocoa.
2d Breakfast, 10 A.M.	Olives. Oysters. Burgundy.	Chipped Beef. Claret.	Boiled Ham. White Wine.	Fromage de Brie. Bitter Ale. Claret.	Buttermilk Iced or plain. Grated Cheese.	Boiled Lobster. Mayonnaise. Claret.	Salami, or other Sausage. Claret, Burgundy.
Dinner, 1 P.M.	Chicken Soup. Roast Chicken, Celery. Mushrooms, Cauliflower. Omelette with Brandy. Beaten White of Egg baked on Crust. Nuts, Claret or Burgundy.	Bouillon. Roast Beef, Watercress or Chicory Salad. Cauliflower, boiled plain. Swiss Cheese. Riesling or Claret.	Oxtail Soup. Roast Veal. Spinach with Egg. Celery, Radishes. Oranges. Claret, Riesling.	Celery Soup. Roast Lamb. Asparagus or String Beans. Olives, Celery Salad. Claret, Riesling.	Consomme or Bouillon. Roast Pork. Red Cabbage. Lettuce or Chicory Salad. Cucumbers. Grated Cocoanut boiled in milk. Coffee.	Oyster Soup with Eggs, or Oyster Stew. Striped Bass or other Broiled Fish. Sprouts or Cabbage. Omelette. Coffee.	Hamburg or Porter-house Steak, with Egg. Salad, Sausage or Cheese. Nuts. Coffee. Wine.
Lunch, 4 P.M.	Ice Cream—pure, without sugar or starch. Claret, Riesling.	Nuts. Coffee.	Oysters. Wine or Coffee.	Sardines in Oil. Claret.	Chocolate. (prepared.)	Anchovies, or Herring, or Sardines. Claret or Bitter Ale.	Boiled Ham. Claret or Chocolate.
Supper, 7 P.M.	Cold Chicken, Lettuce. Chicory or Roman Salad. Soft-boiled Egg, Tea.	Bouillon. Mutton Stew, with Onions. Brussels Sprouts, with Butter Boiled Eggs, Lettuce. Tea.	Oxtail Soup. French Veal Chops. Tomatoes. Omelette, Lettuce. Radishes. Tea.	Bouillon. Lamb Cutlets or Chops with Asparagus. Oysters and Tomatoes. Tea.	Bouillon. Pork Chops. Stewed Tomatoes. Artichokes or Oyster Plant Shrimp Salad. Tea or Wine.	Roast Oysters. Soft Boiled Eggs Spinach or Cauliflower. Lobster or Crab Salad. Wine.	Broiled Duck, Celery. (or Broiled Steak.) Cold Slaw or other Salad. Artichokes, Asparagus, Spinach. Claret. Roquefort Cheese.

SECOND TABLE.

	SUNDAY.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Breakfast, 7 A.M.	Broiled Chicken. Eggs. 2 ozs. Toast. Coffee, Cream.	Ham and Eggs. Toast. Coffee and Cream.	Ham Omelette. Toast. Coffee and Cream.	Bacon and Eggs Fried or Scrambled. Toast or Rolled Oats, 4 ozs. Coffee, Cream.	Hamburg Steak with Egg. Two ozs. Bread. Coffee, Cream.	Tenderloin of Sole, Breaded. Or Omelette or Fried Smelts. Toast. Coffee, Cream.	Ham and Eggs. Coffee and Cream. Toast (3).
2d Breakfast, 10 A.M.	Pickles, Olives. Oysters. Claret.	Broiled Ham. 4 ozs. Rye Bread and Butter. Bitter Ale.	Cream Cheese. Rye Bread. Claret.	Buttermilk. Fromage de Brie. Rye Bread.	Ham Sandwich. (2 ozs. bread with plenty of butter.	Oysters. Cocoa. 2 ozs. Bread.	Boiled Egg. Olives, Pickles. Claret.
Dinner, 1 P.M.	Chicken Soup, with Rice. Chicken Fricassee on Toast (2 ozs.) Cauliflower, Asparagus. Oyster Patties (only the oyster to be eaten). Calf's Foot Jelly. Wine. Coffee.	Consomme or Bouillon. Roast Beef or Boiled Beef, with Mashed Potatoes fried in Butter, to make Potato Balls. String Beans. Nuts. Claret or Burgundy.	Vermicelli Soup. Roast Veal. Cauliflower. Potato, fried in Butter. Salad or Radishes. Currants. Claret.	Rice-Tomato Soup. Lamb Roast and Spinach. Potatoes (Saratoga Chips). Lettuce or Chicory. Cocoanut Pudding, without Sugar, or Bordeaux Sauce. Burgundy.	Bouillon. Roast Pork. Potato Dumpling (2). Red Cabbage. Shrimp Salad. Claret, Coffee.	Oyster Stew. Fried or Broiled Fish with Saratoga Chips. Lettuce, Chicory. Watercress. Coffee.	Celery Soup. Breaded Pork Chops. Potato Dumplings. Spinach or Asparagus. Cream Cheese. Coffee. Claret.
Lunch, 4 P.M.	Ice Cream (pure), or Roman Punch. Coffee.	Chocolate. One Fresh Roll.	Cocoa. One Fresh Roll.	Anchovies or Oysters. Wine.	Sardines in Oil. Claret.	Herring or Sardines. with Potato Salad, or Lobster	Smoked Tongue Sandwich. Or Sausage, with 2 ozs. Bread.
Supper, 7 P.M.	Olives, Radishes. Lamb Cutlets, or Broiled Sweetbreads. Asparagus. Coffee or Wine.	Soup. Cold Roast Beef. Sardines. Lettuce. Coffee, Tea or Wine.	Breaded Veal Chops with Stewed Tomatoes. One Potato Ball. Soft Boiled Egg. Salad, Wine or Tea.	Lamb Chops. Asparagus. Potato Pancake (1). Fried Eggs or Omelette. Tea.	Mutton Chops. Cold Slaw. 2 ozs. Bread. Omelettes, Plain or Spanish. Tea.	Roast Oysters or Baked Fish. 2 ozs. Bread. Shrimp Salad. Claret.	Mutton Stew. Onions and Sprouts. Stewed Tomatoes. Omelette. Plain or Spanish. Claret, Burgundy. Tea, Coffee (4).

FOOT NOTES TO TABLE II.

1. Potato Pancakes. To make this culinary preparation, take about one pound of potatoes, grate the same and press through cheese-cloth; this will partly remove the starchy matter. Mix this paste with one beaten egg, two tablespoonfuls of milk, and about six tablespoonfuls of sour cream; add salt and pepper, divide into flat round cakes and bake in plenty of fat.

2. Potato Dumplings. Press a pound of potatoes as above, beat up with egg, milk and sour cream, as above. Mix well and add to the mass a trifle of yeast, about the size of a bean. Let stand for an hour, form into balls and boil in bouillon, until done, *i. e.*, until they float on top.

3. Toast. When referred to above, it always intended to give about 2 ozs. at a time.

4. Recipes for the preparation of all dishes mentioned in both tables can be found in any cook-book with the exception of the above specified ones. For sweetening nothing but saccharine is to be used.

As far as the wines ordered are concerned, it is absolutely necessary that they should not be sweet wines, that is, contain sugar in a free form. Clarets, Burgundys, Bordeaux of the red wines, light Rhine wines, Morelle wine, California, Reisling and very light and mild Sauterne (heavy Sauternes contain much sugar) as white wines are about the only varieties permissible. Beer, ale and porter must be strictly prohibited, only bitter ale as containing a mere trifle of malt being allowed at times. It is best to have all wines and other liquors examined regarding the sugar contained therein before advising a patient to drink the same. Gravies and sauces for the first table must be simply prepared from the meat juices; in the second class, where a strict albuminoid diet is not carried out, a little flour may be added for the purpose of thickening and flavoring.

Regarding bread, it should be remarked that during recent years Ebstein, of Gottingen, has obtained excellent results with a special form of flour called aleuronot which he has baked into aleuronot bread in various proportions with ordinary flour. Its advantage lies chiefly in the better taste, and is reported to be the best substitute for ordinary bread. Any one who has treated a diabetic knows what this means. As yet it is not obtainable in this country, but no doubt soon will be. Such a preparation will enrich the dietary of the diabetic to a great extent and in fact will aid to bridge over the main difficuity. Toasted bread or the crust of fresh roll in limited quantity have often been allowed as possessing less controvertibility than ordinary bread and certainly being of more advantage than the various forms of gluten bread and anti-diabetic biscuits, only too often carelessly prepared and actually useless. Many patients would just as leave chew saw-dust as such biscuits.

Milk or cream may ordinarily be allowed to diabetics; caution should, however, be observed, as it has been demonstrated that an increase in sugar will follow the plentiful ingestion of milk in some cases. As far as the skimmed milk is concerned, it is well known that Donkin maintained to cure diabetes by a strict skimmed milk diet. It may be of advantage in some cases and should be tried when the disease is obstinate. One rule must always be observed in attending to the diet of a diabetic patient. If the patient wastes away on any diet, no matter what, his dietary must be looked after at once; the wasting of his body in flesh and power is as much, if not more, an index for treatment as the quantity of sugar in the urine.

The hygienic part of the treatment should also be given especial attention. Of course, the entire mode of life cannot be changed with all patients. It is well enough to order the patient to lead a quiet life, free from worry, etc., but it is not always feasible to carry out such injunctions. Patients must be instructed to avoid all excess and dissipations, late hours, entertainments which may cause much nervous excitement and such other so-called pleasures of civilization which may not harmonize with the plan of treatment. In regard to clothing, flannels should be worn next to the body, and the patient warmly but comfortably dressed, so as to avoid all unnecessary exposure to colds, which may become quite dangerous in his condition. The skin should be kept clean by frequent baths and douches. Teeth and mouth should be cleansed by the frequent application of tooth brush and water and much care should be given to the general condition of the mouth.

Exercise in the open air must be prescribed for all patients able to be about. It should be used in proper moderation and in the different forms suitable—walking, riding, gymnastics. If the patient is too weak for active exercise, massage may be substituted for it. In patients yet possessing sufficient strength active personal movements will be of more advantage than massage possibly could be. Turkish baths are also useful in the milder cases as they excite the skin and relieve the kidneys somewhat of their work and conduce to the well-feeling of the patient.

Not much can be said as to the efficiency of drugs in the treatment of diabetes mellitus. Many have been tried and equally many have been found wanting. Antipyrine, jambul, opium and its alkaloids, especially iodine, iodoform, salicylic acid and the salicylates, quinine, saccharine, peroxide of hydrogen, arsenic, carbolic acid, the various salts of zinc and the valerianates, all have had their day and none have been of more than symptomatic value. In fact, medication in this disease is altogether symptomatic.

Cod liver oil deserves in this respect perhaps the front rank, its purpose being to aid in keeping up the vitality of the patient and thus it will always be of value in this disease.

To classify the value of drugs in this disease would be a difficult undertaking; whatever symptom may be the most prominent should receive the most attention. The excessive thirst so often complained of is often quenched by the administration of alkaline mineral waters or by copious cold water enemas; the latter often are very efficacious when other means have failed. The craving after certain foods can be alleviated by occasional doses of opium and cocaine. Gastric disturbances must be treated by the ordinary means according to their origin,and it should not be forgotten that patients suffering from diabetes are very liable to neuroses of the digestive system. The diabetic always suffers more or less from nervous disturbances. Neuralgic affections of the different nerves, partial paralysis, anæsthetic and hyperæsthetic areas, spasms, etc., occur often and baffle medical ingenuity.

Cutaneous diseases are also very frequent and equally obstinate; pathologically considered, those diseases of the skin which are of an acknowledged neurotic origin,such as zoster,urticaria and pruritus occur most frequently in diabetes. Furunculosis is also a very frequent accompaniment of diabetes; the sulphide of calcium in rapidly increasing doses has proved most successful in this complication. Preventive treatment, however, is the most effective and therefore the diabetic should not neglect those hygienic measures which pertain to the skin.

Much has been said about the use of the alkalines in this disease and much good has been reported from it. The mineral waters of Carlsbad, where the treatment of diabetes is carried on in a very large way, are especially vaunted for their efficacy. The activity of the alkalies, however, seems to be limited to the cases characterized by obesity, plethora, and gouty symptoms and it is mainly through this class of patients that Carlsbad has obtained its great reputation. The use of the sprudel coupled with the strictest injunction regarding diet, in connection with the change of surroundings and different mode of life, does not fail to benefit the cases mentioned.

In the severe form, where sugar is formed continually in spite of rigid albuminoid diet, it would be folly to resort to such active medication. Cod liver oil, a diet containing a moderation of starchy food, in conjunction with tonics suitable to the case and proper hygienic measures will then be of undoubted benefit.

When coma has supervened therapeutic measures are of almost no avail; the cases in which a successful result was had, are few. Saline enemas, intravenous injections of warm normal salt solution or of a 3 per cent. bicarbonate soda solution, transfusion of blood, all the ordinary stimulants such as ammonia or alcohol, are recommended from various sources and success is claimed. Inhalations of oxygen have also been given. Schmitz, of Neuenahr recommends large doses of castor oil, with the purpose of bringing about quick and copious evacuations, as he thinks that decomposition of the intestinal contents has much to do with the cause of the coma. It has been objected to this procedure, that on the other hand, it is often noticed that comatose diabetics could not retain their fæces and still perished. This latter might, however, be also construed as an unsuccessful effort of the vis medicatrix naturæ. Anyway the suggestion deserves a trial from its very simplicity and the hopelessness of other measures.

Don't.

Don't fancy that you are insulted, or that there is a conspiracy against you, because your articles come back. It is a physical impossibility to print more than a very small percentage of those that are offered.

Don't overwork the useful word and. Once is often enough for it to appear in a sentence, as a rule. When you see it staggering from fatigue, take it out of the ranks, put a period in its place, and begin the next word with a capital.

COMMUNICATIONS.

PELVIC INFLAMMATION.*

J. C. SEXTON, RUSHVILLE, IND.

Pelvic inflammations in women are so common, so painful, so dangerous, so persistent, so often incurable, so continually destructive, so frequently overlooked, so often negligently treated in the early stages; that a discussion of the subject cannot fail to be of benefit to us.

In presenting a paper the author writes either "from experience" or "for experience." The young docter writing "for experience" is often the subject of some little contempt on part of older and more experienced readers. But in writing for a society "for experience" may be of just as much value as "from experience." I come before you to-day to get the benefit of your views upon the topic just stated. Let us have the experience here to-day of the general practitioner. I write for his experience; how he observes these cases, how frequently, traces them to what causes, what methods of diagnosis, what plans of treatment he employs, how successful is he. I earnestly call upon him to give us the benefit of his work. and of his study and observation. I write to-day for the experience of the physician-gynecologist, will he teach us of the cases he has watched and I trust faithfully recorded.

Of the surgeon-gynecologist let us be informed of what he finds and how he finds it. Will he not tell us his views from the store of his knowledge in dealing with the results of inflammation of pelvic organs. Of the ravages produced, of the destruction, and may we not expect that his work may be helpful in showing how such conditions may be avoided and such danger averted. Certainly an interchange of views will be of benefit and with this plea I submit a little of my own experience and ask yours in return.

When speaking of pelvic inflammation our ideas may be somewhat confused. Under the guide of former teachers many doubts arose as to the nature and results of pelvic diseases. To-day pelvic inflammation is only another expression for inflammation of the ovaries and tubes, for upon the health of these organs depends the health of the patient, and what damage will be wrought to these organs is the constant anxiety of the physician. Pelvic peritonitis indeed we might say is almost all that we to-day consider is our study of pelvic inflammation. Hence we speak almost synonymously of pelvic peritonitis, tubal disease, inflammation of tubes and ovaries, and disease of the appendages.

We have long ago left behind the various designations of parametritis and perimetritis because they did not designate. So then when we come to consider the causes of pelvic inflammations we ask ourselves what are the things and circumstances that will produce dangerous and lasting injury to those essential, if not vital, organs.

Let me be not misunderstood, for I have not said there was no pelvic inflammation without involvement of these organs, but there is no pelvic inflammation without danger of these organs becoming involved and their delicate and proper function destroyed. Let us not say there is no pelvic cellulitis, but insist that it is far less common than pelvic peritonitis and is found uncomplicated with tubal disease very rarely.

Inflammation of the fallopian tubes and ovaries and the peritoneum which surrounds and is in relation with them, is very common, and the inflammation generally presents itself in attacks or recurrences. It is very rare that an inflamed tube is restored to perfect health, and an ovary once inflamed never escapes lasting injury. Inflammation of the tubes as a rule, is primarily of the mucous lining, extending outward from the uterus to the fimbriated extremity, thence to the contiguous peritoneum. The irritant that produces pelvic peritonitis almost always comes from without. The exciting cause almost without exception, is septic material introduced into the vagina and uterus.

The first effect of a septic material so carried up until it reaches the peritoneum, is inflammation of that membrane. Rapidly it responds and its first effort is to throw out inflammatory lymph, by which process it first seals up the fimbriated extremity of the tube and thus prevents the exit of any more poisonous or irritating material. The lymph exudate does not stop here, but more is poured out as the inflammatory process goes on, until the tube is enclosed and walled off from the rest of the pelvic and abdominal cavity. While this has been going on the uterine end of the tube has also become occluded by the infiltration of the tissues until the fallopian tube is hermetrically sealed at both ends and lies enclosed in a protective capsule of natures aseptic lymph.

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* Read before the Mitchell District Medical Society at West Baden Springs, July 13, 1893.

This is a hasty explanation of what takes place in the pelvis at the beginning of an attack of pelvic inflammation. Now what symptoms does it present, what are the signs by which we recognize that this process is taking place? Most frequent and constant of all symptoms is pain, and localized to the ovarian regions. Most of the patients will cover with the point of the finger the spot at which they first felt pain, and with great uniformity they place the finger over the site of the ovary. The pain is most acute, and in some cases amounts to an agony. I need not dwell upon this point, for every physician here knows how severe the pain of a peritonitis may become. Then tenderness and high temperature quickly supervene. Nature's battles between tissue destroying and tissue preserving elements is always attended with fire.

There is not infrequently a chill to denote that a battle is on, and rising temperature and pulse at once begin. So pain, fever, tenderness, swelling, tympanites rapid pulse, all are consequent upon this process. The tenderness over the abdomen is nothing to the tenderness of the tissues touched by the examinining finger about the uterus. Swelling of the uterus, lumps in either side and cul de sac, painful lumps, masses, loops of tube, misplaced inflamed ovary, all the organs on fire, this is what will be found in an early stage. Gradually however, under treatment these symptoms subside. The pain gets better, but the soreness persists for a longer time. It may be days or weeks before she can move without pain, and it may be that never again will she be free from that soreness and lameness and tenderness that results from this condition. The ovary and tube may be folded upon themselves, wrapped up in the broad ligament and enclosed. Menstruation occuring soon is liable to light it all up and set it all going over again. A function that once was easy and natural now becomes a torture. Instead of a few days it may last many. The engorgement of the parts at the monthly epochs only excite again the inflammation. Every day, nature makes more effort to protect its inflamed part, bands of adhesions fasten the uterus and drag it into unnatural positions. In short, the inflamed tube adheres to every thing it touches and these adhesions become in time so dense and hard that, as one of my friends has said, "this mass has grown fast to every thing but her soul."

In case the irritant that has set up this process contains pus producing microbes we will have a much more serious state of affairs confronting us. The pus may be in such small quantity that it may become encased as it were in a small portion of the tube and the surrounding tube thickened to an extreme degree, constituting the so-called parenchymatous salpingitis or pachy salpingitis. I have a specimen of this kind from a case of my own, from the cut surface of which pus could be squeezed. In such cases the adhesions are liable to be very abundant owing to the greater effort made to shut off the pus from the general peritoneal cavity. The hardness and density of the adhesions as well as the malposition of organs will depend of course on the degree of inflammation and the length of time it has gone on. In cases where pus forms in the tube the temperature is liable to be very erratic. It may be very high or on the other hand hardly above normal, but the persistence of the fever is what guides us to the presence of pus. These cases of pus in the tube also are the ones in which ugly perforation of the bowel may occur. The pus may burrow and abcesses point in the vagina or near the rectum, and sinuses are left which refuse to heal because a diseased sloughing tube remains as a nidus. These abcesses and sinuses are only natures poor efforts at laparotomy. The pus must get away. No longer is she able to wall it in, but she must evacuate it.

Given then a case of pelvic inflammation, what plans of treatment can we pursue to allay the inflammation and if possible to prevent formation of pus. As for the treatment of pus cases there is only one course to pursue and that is operation. As a rule, however, these are not cases of pus from the start, and it is to the cases of inflammation not purulent in character that our plans of treatment must be directed.

The first indication is to relieve pain and this can be done in most instances best by early adminstration of saline purgatives. Epsom salts in saturated solution is the quickest an most rational method of lessoning pain. It empties the bowels. It abstracts moistures from the tissues. It drains the engorged pelvic vessels and diminishes blood supply to the inflamed part by bleeding one vessel into another. Those of us who are still wedded to the opium treatment of peritonitis will smile with incredulity at the assertion that the pain can be relieved with salts, yet such is the fact and if you don't believe it, try it.

Glycerine into the rectum is another way to relieve the pain quickly, and it does so in the same manner by setting up an outward osmatic current and lessening the engorgement of the tissues. Another drug that is of splendid service is the salicylate of ammonia. Give it in 3 grain doses every two hours and it will lower the temperature, stimulate the heart and kidney, eliminate rapidly from the circulation waste material and is the most reliable intestinal antiseptic that we possess. It is at the same time a valuable antipyretic and possesses analgesic properties only a little inferior to acetanilid. I pass over many other drugs of whose action you know so well, and speak of the local treatment. In the first few days it will be almost impossible to use any treatment whatever locally. The pain and tenderness is so great that it cannot be tolerated, but after free purgation we can apply loose tampons of glycerine over the irregular masses that can be felt under the finger. The effect is sometimes very striking. The swelling is frequently rapidly reduced, but much depends on how the applications are made. No good can come of placing them against the cervix, they must be against the painful tube, slightly lifting it and supporting it, but never making hard pressure. After the tenderness has grown less and after a few days have elapsed, the negative pole of a galvanic battery may be applied. Once every 48 hours is enough and not over 20 milleamperes for not over ten minutes. The effect upon the pain from this application is not infrequently simply wonderful and certainly the swelling does diminish. I cannot be mistaken surely in the effect that I have seen produced, notwithstanding so much has been said by better men against it. Under its influence I have certainly seen lumps, masses, hard tender masses in the broad ligaments disappear, the uterus become movable and the hardness of the vaginal vault disappear. I certainly have seen the effect in some cases, and then again I have just as certainly seen all my best efforts fail and the only thing I could effect was amelioration.

The masses could be made to grow smaller and less tender but they would not go away. The temperature would not go so high but would persist. The uterus was more movable but still fixed and misplaced. The pain was not so great but it was still there. She could maybe straighten out her leg, but for the most part it felt easier to draw it up. The night sweats were troublesome, and although she could sleep some at night, she would have a tired, worn look in her face in the morning. One day better, the next worse. Pain, disappointment, feebleness, tenderness, suffering and chronic invalidism staring us in the face; in short my patient's life was endangered and her health ruined by a something in her pelvis. Many of you have seen cases that so went on, month after month, you were discharged and some one else tried and so on. Now what is the best thing to do with these cases that do not get well. They won't get well. Nature is powerless; art must aid. Abdominal section offers the most brilliant and successful page of modern medicine and surgery in the treatment of these very cases of chronic inflammation of the pelvic viscera. Open the abdomen and remove the source of the disease. Most of the cases will recover under treatment and rest and proper care, but some will find their only relief at the hand of the surgeon. We are able to-day to cure many an invalid that only a few years ago was resigned to opium and an early grave. Cases that only a few years ago would have come under that now rapidly diminishing list-incurable, can now be not only saved but cured, to stay cured and fill a useful place in society.

THE TREATMENT OF CARBUNCLE BY CARBOLIC ACID INJECTIONS.

C. H. WILKINSON, M. D.,* GALVESTON, TEXAS.

On June 11th, 1893, I was called to attend Mrs. S., living some twenty-one miles in the country, for a carbuncle which had existed a week.

I found the lady in bed, with high fever, and apparently suffering severe pain from the effects of a carbuncle situated immediately under the right scapula, and which with its highly inflamed and sensitive areola was about the size of a large saucer. From long continued pain the patient's nervous system had become highly wrought up, and long fasting had reduced her strength to that of a child. Selecting four of the most conspicuous sinuses perforating the growth, I injected into each one of them a solution containing two minims of carbolic acid, throwing the remedy in each instance out towards the periphery of the tumor, and towards the most highly inflamed portions. Directing her to keep hot poultices applied to the diseased parts until all suppuration had ceased, I left the case and did not see her until the 25th of June, two weeks later. At this date the carbuncle was practically well, and the patient had been up and riding about the country for several days. All fever, pain, inflammation, etc., had entirely disappeared, and a silver dollar could have covered the small healthy ulcer remaining.

Now, there is nothing much in the mere recital of the foregoing case, except the principle established by the treatment pursued. For the past fifteen years I have been treating carbuncle by the acid injection plan, and I can unhesitatingly pronounce the process to be as near a sure and speedy cure for this dreadful malady as can be found in any text book if we except the knife as a means of cure. But unlike the knife, the acid produces comparatively no pain, and almost anyone can employ it in such cases if supplied with the proper equipment; to wit: the acid itself and an ordinary hypodermic syringe.

I usually add to ten minims of pure carbolic acid as many drops each of alcohol and glycerine, and have then as much of the injecting fluid as would be needed to cure the largest sized carbuncle. One grain of cocaine might be added to the above to insure freedom from pain in its administration, but this is hardly necessary as the carbolic acid itself soon acts as a local anæsthetic, and the little smarting that attends its use only lasts about a minute.

An ordinary hypodermic syringe is generally employed to inject this fluid with, though a Heaton hernia needle is preferable on account of being supplied with a blunted point. Of the foregoing mixture twenty minims should be injected right and left through the tumor, care being used to throw the fluid out towards the inflamed periphery until all portions of the carbuncle have been reached. Any excess of fluid which may ooze back through the sinuses should be picked up with clean blotting paper, and after every such injection a soft pad of absorbent cotton should be bandaged down upon the growth. Usually one of the injections will suffice, but occasionally it may be found necessary to repeat the operation in the course of forty-eight hours, should the first not be sufficient to allay the inflammation.

My attention was first called to the effects of carbolic acid upon carbuncle in 1878, when I saw a case delirious and nearly dead from the action of this terrible disorder, which I cured in a few weeks by the acid treatment. Many other cases fell in my hands shortly afterwards, all of which made excellent recoveries under the same treatment. So that in October, 1885, believing that I had established a principle in this direction, I brought the subject before the Galveston Medical Club in an article which was soon after published in *Daniel's Texas Medical Journal*, and which received many favorable notices from other medical publications.

However, the older methods are still in vogue by many surgeons, and the knife and curette are almost as busy to-day upon carbuncle, much to the horror of the victims, as they were twenty years ago.

Carbolic acid is speedy, safe and certain, as well as a painless agent in controlling these morbid productions, and I am surprised that its employment is not more universally advocated by the profession than it is. Carbuncle is a disease attended by a specific, or rather by a peculiar form of inflammation, an inflammation that resembles erysipelas in its external manifestations, and its tendency is decidedly towards not only the death of the parts affected, but towards the death of the patient himself.

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*Chief Medical Officer and Surgeon to St. Mary's Hospital.

It has little or no respect for the *vis medicatrix naturae* and if not molested by surgery will destroy the life of the sufferer in two or three weeks. Many excellent citizens of this state have fallen victims to its ravages in the last few years, whose lives might easily have been saved had the acid treatment been resorted to at almost any stage of the patient's disease, and it is just to prevent similar occurrences in the future that I have been induced to bring this method of treatment before the public again.

Carbolic acid immediately destroys the peculiar inflammation or rather the cause of this peculiar inflammation which attends carbuncle. Rarely is it necessary to repeat the injection method if the first was administered properly, as was done in the case of Mrs. S., referred to, so that a physician can actually conquer one of these pathological monsters in ten minutes, or less time, and return to his office feeling confident that his enemy will give him no more trouble.

It is true that some care and nursing will be required in the retrograde stage of carbuncle-poulticing, strapping and silver applications will probably be required to expedite healing, but the specific nature of the sore having been destroyed by the acid, we have left only a simple, healthy ulcer to look after for a few days, instead of a malignant and tormenting affection.

RAILROAD SURGERY.*

W. MURRAY WEIDMAN, M. D., READING.

Through the courtesy of your presiding officer the honor of presenting the customary "Address in Surgery" devolves upon me. It must be conceded that the multiplicity of journals, in which the various plans of treatment in hospitals and private practice are reviewed, by an army of earnest workers, whilst shaping opinion, has a tendency to confuse the judgment of the busy practitioner remote from medical centers. This accumulation of diverse ideas would have occasioned your writer much embarrassment had he not been able to avail himself of the resolution of 1871, which permits, restriction of the subject to certain problems "in surgery," a privilege also accepted by his predecessors, many of whom were more highly favored by being reared within the walls of medical colleges and surrounded by hospitals and laboratories. Nevertheless, with much diffidence the task is undertaken in the endeavor to gratify friends who have requested the paper to be practical, thus realizing that the subject presented must be especially intended for those who, like the author, belong to to the class remote from the medical centers, but not without the hope of recalling some experiences which in the practice of all have proven to be efficient and certain means of relieving suffering humanity, especially in injuries incident to employees on railways.

The advances toward perfection, in our science, are not of such rapidity as to be marked by annual strides. Remedies and plans of treatment presented plausibly by conscientious advocates are frequently held in abeyance only to be discarded by the test of time. The principles governing the treatment of accidents are the same whether applied in hospital or elsewhere. The technique, which ought to be the same, is dependent upon the armamentarium and the conveniences of application. Hence the occasional visitor to the medical ampitheatre is often apparently much more interested in the preparations and arrangements than in the dexterity of the operator or subject presented, which are an expression of an endeavor to condense into the emergency bag, (to be used under adverse surroundings,) all the essentials of improved surgery as exhibited in the professor's arena.

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* Address in Surgery before Pennsylvania State Medical Society, 1893.

Many of you have have frequently been called, at all times, to accidents of a certain class, and fully realize under what conditions patients are found, how difficult and almost impossible the application of asepsis. For example the patient is an employee of a workshop or railroad, perhaps even a worse subject, some one who has stolen passage on the railroad. No nurses are near to make the necessary preparation of patient or operation; no blankets or vessels of hot water provided to keep the body warm; no towels steeped in antiseptic solutions to surround and protect the wound from pollution; the clothing soiled with dust and grease, often soaked with blood, rain or perspiration. The assistants are fellow workmen, willing to aid, but like the injured person, their hands are covered with grime and their clothing in little or no better condition. The ampitheatre is Nature's own, or if perchance under shelter, it is only for temporary use, hastily arranged and ill adapted. There is neither time, opportunity nor ability to bathe the injured, considered so essential prior to operations in hospital practice. No attention can be given to the bowels, and the stomach is often loaded with undigested food. Time cannot be lost, the news has spread that an accident has happened and the curious crowd is gathering not only to noxiously impregnate the surrounding air and render it more stifling, but to interfere with the work of the surgeon and his assistants. Added to these discomforts are the patient's bodily pain, mental anguish and the consciousness that loss of time will entail suffering to dear ones at home. The loss of sleep, fatigue, and excessive heat or cold, frequently enhance the difficulties. Fortunately the encouraging words of the surgeon can greatly allay anxiety—the administration of an anodyne or the anæsthetic produce temporary unconsciousness. Happily the establishment of small hospitals, in many towns, through the magnanimity of state and private charity, has of late years done much to improve the service, and formation of relief associations to ameliorate the sufferings of the injured and the wants of those dependent upon wages or salary, has lessened another adverse influence.

HEMORRHAGE.

In the long list of accidents, there is no condition that demands more prompt relief than hemorrhage. No scene is more appalling than the sight of blood gushing in torrents from an open wound ; none occasions more anxiety; none taxes the ingenuity, tests the readiness or tries the courage of the surgeon to a greater degree. Of course, the oozing from arterioles and venules, when not spontaneously arrested, can be easily controlled by pressure, exposure to air or by the application of ice or hot water. It rarely ends fatally unless complicated by a hemorrhagic diathesis. Likewise in venous hemorrhage, care must be taken, no matter what measures are employed, to stay the waste, not to obstruct the return of blood to the heart, bearing in mind that position will aid materially in its arrest. It is the arterial flow, that scarlet fluid, escaping in jets, not in a continuous stream, sometimes projected to the ceiling or across a room, that is never stayed by change of position, that causes horror and dismay, that invites, produces and prolongs shock. Many of you, I know, have heard the agonizing cry of the wounded when the nerve is pressed upon, have noticed the turgescence of the veins about the seat of constriction, have seen the anxious countenance, the ghastly pallor, the dilated pupils, the sick stomach, the profuse perspiration preceding syncope, have tried to satisfy the demand for water to quench the thirst, often the direct result of loss of blood and the misapplied garotte, the tourniquet or the elastic constrictor of Professor von Esmarch. Until the police, the trainmen, and the laity are taught that it is wrong to use such appliances above or below the wound, but that they should be directly over the wound or along the course of the bleeding vessel, that pressure will be made against a bone ; so long the surgeon must expect interference with union by first intention, if no more serious trouble. Prof. von Esmarch says he has known constriction with his elastic bandage to be maintained seventeen (17) hours unaccompanied by any bad complications or results. It has been demonstrated that such constriction for two hours and a half has been followed "by an unfavorable influence on the karyokinetic process in the tissues when deprived of blood so long." Prof. Senn at the annual convention of the National Association of Railway Surgeons in 1892, after speaking of the advantages and disadvantages of the elastric constriction announced the following conclusions :

"1st. The use of the elastic bandage to secure bloodless condition of limb should be discarded, as compression of the parts affected may produce mechanically dissemination of malignant tumors and microbic diseases.

2d. A bloodless condition should be secured by elevation of limb prior to constriction.

3d. Constriction should be made with sufficient force to interrupt at once both the arterial and venous circulation.

4th. Prevent venous stasis by constricting quickly, beginning pressure on the side of the limb supplied with the principal blood vessels.

5th. Linear or too firm constriction should be avoided, as they are liable to give rise to muscular injury, temporary or permanent paralysis.

6th. Elastic constriction of a limb for hemastatic purposes should be diffused over an annular space not less than two inches in width, and can be made with least danger of injuring important structures by a broad elastic constrictor made for this purpose or an elastic bandage.

7th. Circular constriction of a limb should be made if possible, at a point where the large nerve trunks are well protected by overlying muscles, and if this cannot be done on account of site of operation, a thick compress of gauze should be interposed between the constrictor and the limb.

8th. The vitality of tissues when excluded from the circulation is endangered by prolonging the ischemic condition for three or four hours and gangrene may take place if constriction is continued for a longer time.

9th. The process of karyokinesis in tissues deprived of circulation by elastric constriction is unfavorably affected if constriction is continued for more than two hours."

In February last, Prof. von Esmarch unwilling that the principle of his invenion, viz: elastic compression, which astonished Billroth and received the commendation of Simon, von Langenbeck and many others, should be descredited; protested against the condemnation of Prof. Senn, who had said it was "not only useless but injurious" as follows. "I have remarked in the beginning that firm elastic compression in cases of suppurative affections is dangerous and advised in such cases to elevate the extremity for a short time before applying constriction'and had subsequently no ill result. The same applies to soft malignant tumors, but I do not think it justifiable to abandon elastic compression entirely for these reasons alone, as there are still a sufficient number of cases left to which compression would be unaccompanied by any risks and would certainly be far superior to simple elevation, among which are the following.

1. Operations for necrosis and bone abscesses.
2. Osteotomies.
3. Operation for pseudo arthrosis.
4. Operation for reposition of old luxations.
5. Extirpations of fibroma, lipoma, angioma, osteoma, neuroma, etc.
6. Plastic operations on cicatrices.
7. Operations for Dupuytren's finger contractions.
8. Operations for suturing nerves or tendons.
9. Operations for ligation of arteries and veins.
10. Operations for aneurism.
11. Operations for removal of foreign bodies in deep tissues.
12. Operations for resection of joints without suppuration or running fistula.
13. Operation for obliteration of joints.

The bad results which have been observed after too long constriction, necrosis of the margins of the wounds, slow healing, paralysis, etc., are only caused by unnecessarily tight constriction. The constriction which I use to render the limb temporarily bloodless, as you are well aware, is not the former hard rubber tubing with chain, which I now only use in high amputations and exarticulations of the shoulders and hip joints, but the ordinary rubber band five centimeters, two inches wide, and about one hundred and forty centimeters in length, with an ordinary hook to fasten it. The important part is that the turns over-lap each other evenly and with equal pressure. In operations on the fore-arm it is applied high up about he middle of the arm and not close to the elbow joint. In operation on the leg the constriction is made to the middle of the thigh and not close to the knee joint, thus avoiding places where tendons and nerves lie in close proximity to the surface where the successful constriction of the parts would be interfered with."

Prof. Senn replies, I will "admit that in the operations named in your letter, elastic compression could be employed without incurring immediate risks, but I must insist that it is not necessary. I have no doubt that if the directions given in the letter concerning the use of the elastic constrictor were carried out properly, we would hear less frequently of paralysis as one of the results of two tight constriction. The fact, however, remains that not infrequently paralysis of the musculo-spiral nerve follows as one of the immediate consequences of constriction of the arm."

Prof. Ashhurst to prevent the capillary oozing which follows the removal of the elastic tube, recommends "to place a tourniquet in position, but not screwed down, over the main artery of the limb, and then apply the Esmarch tube a few inches above the point at which the operation is to be performed, as soon as the principal arteries have been secured, the tourniquet plate is screwed down, and the tube removed." In this way time is afforded the vessels that may have been dilated by the paralysis of the vaso motor nerves to regain their normal tone. Prof. von Esmarch's plan is to secure the bleeding vessels, and with deep sutures close the wound.

Prof. Agnew had discarded the use of the elastic bandage, except in special amputations, on account of the time lost in staying the blood from the distended vessels after the removal of the tube and the excessive number of ligatures required. For years the writer in ordinary operations, has depended upon the elevation of the limb, an elastic constrictor two and half inches wide and one yard long, wound round the limb to embrace at least four inches, and its ends secured by means of large hemastatic forceps, in preference to a knot or hook and chain. In amputations involving the hip and shoulders, he has depended upon digital pressure and the hemostatic forceps, in accordance with the advice of Liston, who said he would "trust to a not very efficient assistant rather than put on a tourniquet," as he believed much more blood was lost from the use of the tourniquet than without it.

Anesthesia, the elastic bandage and asepticism have emboldened the surgeon to invade cavities of the body heretofore sacred, to incise and remove entire organs or portions thereof, to open joints, to suture bones, tendons and nerves, to take greater risks, in the endeavor to restore the functions of the body or a mangled limb to usefulness. Conservatism has its limits, and no matter how desirable or tempting the practice is, there remains but one course, to do that which was once considered an act of rashness, haste or brutality, but now is good surgery and an act of true humanity, as there are constantly accidents occurring which demand prompt and immediate amputation. Delay or conservating treatment in these cases is hazardous, encourages pyemia, erysipelas, tetanus, death. We need only refer to the results, as reported by Bullingham, a sequence of the order of Bilguer, who said "to cut off a limb, after a bad wound, what is it but to add wound to wound, to heap new pains upon a disordered system"—who whilst surgeon in chief of the Prussian Army "forbade amputation in any case and boasted that no surgeon had amputated a single limb. During his term 6,618 soldiers were wounded, one half of those who had a gun shot fracture of the extremities died, and of the remainder more than one-half were left in a state totally unfit for any kind of employment, civil and military. We submit to your judgment how many lives would have been saved had more prompt, more radical treatment been pursued.

AMPUTATION, PRIMARY OR SECONDARY.

The question still remains unsettled, when shall amputation follow injury? Shall it be immediate, primary or secondary? It is stated that Duchesne in 1625, first recommended that the operation "should be performed before the inflammation and other constitutional symptoms shall have supervened." About 1692, Surgeon Wiseman declared himself in favor of primary amputation, especially in injuries below the knee. Hennan laid down the maxim which Le Dran, in 1737, had promulgated, that "whenever there is plainly a necessity for losing a limb the sooner it is done the better." Pott says "there are many cases," and there ever will be, "where the patient's life is much more put to hazard in an attempt to save a limb than by operation for removing it. It is better for a patient to live with three limbs" or less "than die with four." Prof. S. D. Gross in speaking of railway accidents says they "are extremely liable, if an attempt be made to save the limb, to be followed by the worst results;—often the mischief is deep seated and involves muscles, tendons, aponeuroses, vessels, nerves, bones and joints, the limb is hopelessly injured and will require removal." Prof. Agnew says "persons occasionally recover from wounds of the most extensive and apparently hopeless character, without operation it is true, but such very exceptional cases are not to influence the judgment of the surgeon when deciding upon the propriety of an amputation in any given case." Military statistics amply sustain the practice of immediate amputation. Larrey admits that "a great number of soldiers were lost, although operated upon within the first twenty-four hours, yet the operation had been made too late." During the Crimean War "the success attending primary operations was two-thirds greater than in secondary among French troops," and that among the English troops did not materially differ. At Sebastapol, one-half of the primary amputations performed upon the Russians proved successful, and two-thirds of the secondary ones were fatal. Equally significant are the statistics of the War of the Rebellion, according to Dr. Otis, "who says there were 5,273 cases of amputation in the continuity of the arm for gun-shot injuries whose results were obtained. Of which number 3,259 were primary operations, with 602 deaths, a mortality of 18.4 per cent, 411 were secondary amputations, followed by 114 deaths or 27.7 per cent., 902 were intermediary operations, with 302 deaths or 33.4 per cent." So decided are these figures, that Prof. Agnew concludes "the only condition, justifying delay, when a limb has been doomed to amputation, is shock."

But why delay? Does not hesitation increase the risks from erysipelas, tetanus pyemia, pneumonia, vescical affections and gangrene of the stump? Are the sufferings of the victims diminished? Can the transportation to hospital or home, in a jolting car or over a rough road, be better born with a mutilated limb, dangling in shreds, and covered with dirt and gravel, mixed with gore, no matter how well supported or protected? Will the dangers from absorption of noxious fluids be diminished by such delay? Will the mind of the sufferer, on discovery that the mangled pulpified mass has not been removed, be any easier? The removal of a toe or a finger is done without questioning the amount of shock. In compound fractures of either extremity, the indications are and the practice is, to at once reduce the fracture and maintain the bones in proper position. In depressed fractures of the skull do we not, as soon as the symptoms of compression or paralysis appear, at once elevate the bone and remove the cause of disturbance. In neither case do we delay on account of shock. Why not fulfil the indications when amputation is as obligatory, as promptly demanded? Can the removal of the offendings, unless, cumbersome mass be more objectionable? Why wait for days, weeks, to do what is demanded promptly, and immediately demanded? Can we not under the blessings of modern science care for the stump, better than for the magled parts? Will not the duration of shock be shortened by prompt removal? Why wait until the victim has recovered, only to pass through the same nervous depression? Can we not with the aid of hypodermic injections of ether, whiskey, atropine, strychnia or nitroglycerine maintain the heart's action steady, sufficiently long, to remove the objectionable mass, then surround the patient with appliances favorable to a speedy and safe recovery.

The writer has been frequently summoned to attend persons injured on the railroad in his neighborhood, often reaching the scene of accident within half an hour. His emergency bag, on the outside of which are strapped two tin trays, is always ready and packed. It contains two rubber aprons, two porcelain dishes, a few towels, a newspaper, two cans of Squibbs' ether each one quarter pound, a cake of soap, (recently a bottle of etherial soap (4 oz) has been substituted), a razor, a fountain syringe (2 qts) with hard rubber stop cock, 1 oz. glass syringe, 50 tablets of mercuric chloride, a bottle of carbolic acid (4 oz), 1 yd. of iodoform, carbolic, boracic and bichloride gauze in tin boxes, one fourth pound of absorbent cotton, one-half dozen sponges, rubber drainage tubes of various sizes, white and black silk, cat gut in hermetical tubes, 4 oz. whiskey, 1 doz. bandages of different lengths, pins, 4 oz. of peroxide of hydrogen, 2 elastic constrictors, 1 pepper box filled with iodoform and boracic acid powder, needles and a needle holder. The instruments and medicines are carried in separate cases. Thus equipped he has always felt ready for any single emergency.

Simple inspection will show how desperate would be any attempts to save a mangled limb. Sometimes the unbroken skin does not even show the extent of destruction. In these cases unless other parts of the body have been injured or delirium exists, not the result of drink, little time is required in preparation to remove the limb.

In giving ether the writer uses a cone, and after a few minutes entrusts the management thereof to an assistant, with instructions to withdraw the cone as soon as there is a cough or difficult breathing, sure signals of danger, which must be heeded. By observance of this law he has never had a death follow the administration of an anæsthetic and rarely has been obliged to administer hypodermic injections to maintain the heart's action. He emphatically protests against the advice sometimes given to patients to take deep and strong respirations, thus inflating the lungs with air, prior to the inhalation of an anæsthetic, far better is it to advise such inspirations after the cone is placed over the mouth and nose.

The use of medicated solutions, which formerly were so freely used for flushing wounds, have not been regarded as essential by the writer who rarely uses any of them if hot water is obtainable, which is only used to arrest oozing or to insure cleanliness. Irrigation was discontinued from no fear of poisoning, but on account of the impossibility of drying the parts, and failure to make this thorough, favors suppuration. The soft condition of the nails, the dyspepsia and loss of teeth, described by Prof. Albert of Viena, which he thought might be attributed to an extensive use of sublimate solutions has never been noticed, a brittleness of the nails and a fissured condition of the fingers of the surgeon and nurses has, however, been observed after the free use of such solutions.

Drainage has likewise been used less freely in incised wounds, and only those of absorbable material, when the flaps have been made through suspicious tissue. Retention of tubes or tents for sixty or twenty-four hour favors fistulous tracks, and prevents union by first intention. Dry dressings have always been preferred, and with gauzes freshly prepared, unless in cases where drainage is required. In either method they are not disturbed unless a persistent rise in temperature, 102° Fah. is noted ; or an offensive odor accompanied by swelling and pain is detected. The wounds are closed with sterilized gut or silk, the latter preferred. The line of incision is protected with powdered iodoform and boracic acid, and six or eight layers of gauze covered with absorbent cotton, all held in place by a bandage. After which the patient is removed to his home or hospital, and a full dose of morphia completes the treatment.

What has been said in regard to immediate amputations, where a single limb requires removal, has been found to hold good in double amputation and would be recommended in cases requiring any more serious mutilation. On four different occasions the writer has been obliged to amputate both legs, above the knee in two cases ; one recovery and one death in each class. The death in the first division ought not to be credited to the operation. The man, who had been injured whilst stealing his way from New York City at night, had his legs crushed by " the bumpers," requiring immediate amputation. He had progressed for ten days without a single discouraging symptom, when it was felt the patient could be assured of his ultimate recovery and was so told. From that moment he refused food ; did everything in his power to irritate the wounds and in spite of artificial alimentation, died within a week from pyema.

With our improved methods of treatment the question of removal of limbs in double and triple amputations, successively or simultaneously, is not of much import, except as concerns the length of time necessary for the patient to be under the influence of anesthesia. If performed seriatim, the cutting and ligitation of arteries should be done quickly; the application of sutures made during recovery from the anesthetic. Such has been the experience of the writer. It has been the means of saving lives; of giving to employees painless stumps, to which could be readily applied an artificial leg or peg; of preventing shock; in some instances of cutting short its existence.

"Ad extremos morbos extrema remedia exquisite optima."

ADDRESS IN MEDICINE.*

S. W. LATTA, M. D., OF PHILADELPHIA.

If I needed any excuse for the departure I will make in my remarks on this occasion, or a precedent for not adhering to the strict letter of the By-Laws of this learned Society, I could find both in the language of my distinguished predecessor at Harrisburg one year ago when he said that "the spirit of the by- laws need not be violated by not literally portraying the progress of pathology and therapeutics during the past year." What I shall present, may, I trust, be of equal benefit to us all as members of the medical profession.

There are so many errors which have inadvertently, as it were, and insidiously, crept into the practice of medicine, that I propose, on this occasion, speaking of them somewhat at length and in detail.

The lamented ex-President of this Society, the late Professor David Hayes Agnew, our revered friend and the preceptor of many of us, once told the speaker that no physician was qualified to take up a special branch of his profession until after an experience of at least ten years in general practice. On this, as on every subject relating in any was to his profession, Dr. Agnew's views were sound, as being the exponents of a broad mind and the result of matured thought. Nothing has so great a tendency to broaden the mind and the man as the general practice of medicine. It makes him self-reliant, thoughtful, charitable,careful of the feelings of others.

The confidence reposed in him; the family secrets necessarily entrusted to him; the advice sought from him; the reverence paid to him; the anxious attention given to his opinions—all tendto broaden and deepen his character and fit him for any sphere of life.

Without the preliminary training thus acquired, the specialist is too apt to be narrow in his views. He has to do with but one small part of the many-sided whole which constitutes the practice of medicine.

While we admit the necessity, nay, the desirability of specialities and specialists, we deplore the tendency of young graduates to rush into them without the experience only to be gained in the general practice of the profession. The relation between general conditions and special diseases being so intimate as regards cause and effect, the cure of the special naturally following the alleviation of the general condition, makes it important that the specialist should have served his apprenticeship as a general practitioner before taking up the burdens of the special branch to which he may have a predilection, to insure his ultimate success in his chosen specialty

A specialist who has never engaged in general practice lacks experience in the general systematic disturbances which may account for the special condition, and of which it is but one, and it may be the least, important result.

With some, so marked is this lack of, shall we say, experience? that it is quite common for them to relegate the patient to the general practitioner with a query as to what constitutes the general ailment, if so be a general ailment is recognized.

Again, specialists who have not this general knowledge are prone to see nothing but the special condition and entirely to overlook the more important matter of the general character of the disturbance.

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* Read before Pennsylvania State Medical Society, 1893.

The study of the action of drugs and experience in their application to diseased conditions, is the ultima Thule of every physician. This is the summit and perfection of our art. It is for this we are physicians. To minister to diseased bodies and minds ; to aid their restoration to health are objects we seek in the practice of medicine, and if errors are committed in these, he who is guilty of them is not that successful practitioner which one and all seek to be.

The growing tendency for a great many years has been to entrust the preparation of all drugs to the pharmacist.

The physician sees his patient and writes his orders in the shape of a prescription which the druggist fills. Whether he accurately compounds the prescription or not, we have no means of knowing. That he makes serious mistakes, we sometimes learn to our infinite regret and sorrow. This custom has led to many errors, one, not the least, being the temptation to write long and intricate prescriptions wherein the action of the many ingredients must of necessity produce more or less antagonism, if not incompatability and entirely nullify the action sought.

There is before me as I write a prescription containing twenty-two ingredients! What a great man that physician must have been in the eyes of the unfortunate patient! That he had such a knowledge of the armametarium of his art, at his command as to be able to fire twenty-two barrels at once! And how grave the malady where such a powerful weapon was needed!!

The habit of substitution on the part of some pharmacists is a confirmed one. The first time it is doubtless practiced with hesitation, but habit makes bold, and while he may have the drug called for, in it may be an unopened package, the temptation possibly fostered by haste and convenience, leads him again to indulge it. The character and condition of the medicine prescribed are also unknown to the prescriber, and it frequently happens that inferior quality renders inert the physiological action intended.

These are good and valid reasons against the present mode of procedure, but there are others yet stronger. The other and better plan is for the physician to carry and dispense his own remedies. It is urged as an objection against this plan that it is beneath the dignity of a physician to dispense his own medicine. Nothing which insures to the benefit of suffering humanity can lessen our dignity. Besides our fathers did it; surely their dignity did not suffer in consequence. Truly, we were well endowed had we the dignity and influence enjoyed by our fore-fathers. Can anything which tends to make the physician more successful in curing disease be neglected by him ?

Again, it is urged that the busy practitioner has not the time to dispense the drugs required for each of his many cases. Surely no one can be too busy to do what is best for his patients.

The practice of hurriedly giving attention to patients, or anything which fosters and encourages the habit, works to the detriment of the physician as well as the patient. Grave errors result therefrom. Mistakes in diagnosis are apt to creep in and consequent injury to patients, and it seems to me that whatever shall lead to a more careful and thorough investigation of each case must of necessity be for the benefit of both physician and patient; to the one, in the feeling of duty conscientiously and properly performed; to the other, in the beneficient action resultant upon the best medical application known to scientific medicine.

Again, in these days when medicines can be obtained from manufacturing chemists in such forms as to be easily carried and dispensed, it should be no great hardship for the physician to provide and dispense them.

Tablets, triturates, capsules, and pills occupy but small space, their cost is not great and by the use of them the benefits to patients are incalculable.

The dangers and drawbacks from polypharmacy, shot-gun prescribing, will be greatly lessened also, and the physiological action of the drugs more likely to be obtained, while the patient will run much less risk of being over-dosed, and cures will not result from carrying a prescription, unfilled, in the patient's pocket.

Further, the patient has his medicine before the physician has left his side and any dangers which might accrue from delay are avoided. Many long days of suffering may be prevented by promptly giving remedies, which could not be accomplished if the patient had to await the sweet will and pleasure of the autocratic pharmacist, who may also be at some distance, in the country districts several miles.

Much expense is also saved to the family, with little cost to you, as the patient will be given only what will be needed until your next visit.

The physician also will be likely to exercise greater care in prescribing remedies if on each visit he is required to furnish that which will be needed until his return to the bedside of the patient, and if a change of remedies is indicated by change in symptom, he will be more likely to make such than if a partially used 8 oz. mixture stares him in the face as so often happens.

The sick room will not look like a drug shop on a small scale, with its array of mixtures, tinctures, pill-boxes, and what not, and the patient's friends will not feel that they are "long" on a quantity of drugs, literally drugs on the market on which there is but small chance to realize. The baneful practice of "renewing" a prescription by presenting the bottle with its numbered label, without orders from the physician, would also be a thing of the past.

Office patients would be more likely to pay cash, as there would be no further expense entailed until the next visit to your office, and while they, under the present plan, may have to save their money to pay the druggist, this will now be paid the doctor, and patients, I refer to those in poorer circumstances, will feel when the physician gives them their medicine, that they have received something which calls for immediate payment. To this fact is largely due the success of our Homœopathic friends among a certain class.

The prescribing largely of the compressed tablets, capsules and such like pharmaceutical product also furnishes the medicine in a more convenient and palatable form, and will in time do away with the great dread of disagreeable nostrums with which our revered forefathers nauseated their long-suffering clients.

The universal practice of prescription writing, is in my opinion largely answerable for the large increase in counter-prescribing and in the consumption of patent medicines. The patient is aware that if he consults a physician he will send him to a drug store for his medicine. He thinks to save the Doctor's fee and goes direct to the druggist for advice and medicine, the former of which will cost him nothing.

The almost universal practice of charlatans and quacks in advertising free consultations with charges for medicine only is one of the leading factors in obtaining patients.

If by dispensing our own medicines we can lessen these two growing evils, is it not our duty to do so? Do not understand me to propose free consultations—far from it; but only to urge the desirability of combining the consultation and medicine fee in one.

Another growing evil of our day is the increased attendance upon free dispensaries where both advice and frequently medicines are given gratis. People well able to pay are constant patrons, and many cases really requiring no treatment constantly infest these places because it costs them nothing. All beneficiaries of these admirable charities should be required to furnish proper certificates before being received and treated as such.

The lamentable ignorance of many practitioners regarding hygienic laws is to be regretted. I take it to be the duty of every physician when called upon to attend a case of either zymotic or telluric disease, to use every effort to ascertain the cause. It goes without saying that a cause must exist. Every physician should be a plumber in theory,—should understand the best means of disposing of offal and drainage; should be *au fait* on the subject of ventilation; should be an expert in the matter of proper food supply and the way to detect adulterations or harmful changes in its composition. He should know what constitutes a proper water supply; the dangers of water contamination and be prepared to suggest the remedies.

The proper disinfectation of houses and rooms occupied by cases of contagious diseases should be as familiar to him as the prescribing of quinine for malarial fevers; and yet how many of us give the proper attention to these most important matters. As physicians we are responsible not only for the cure of diseases but also for their prevention, and unless we are good scientific hygienists we will miserably fail in successfully performing this part of our work. The time may come when we will be employed, as is the physician in China, not to cure disease but to prevent it. The growing tendency of the age is toward preventive medicines, and woe betide that physician who is ignorant of the laws of health and how to preserve it!

We daily hear of learned members of our profession who are successful in "breaking up" a threatened attack of typhoid fever or some other equally serious complaint. They tell the patient that they have been sent for just in the nick of time, else he had doubtless died of the seizure. However, that he is safe now as they feel sure they can break up the threatened attack. How ridiculous and how prone is such conduct to bring reproach upon our noble profession. These record breakers should be frowned down and the people given to understand that we do not all countenance fraud.

I deplore the growing tendency to deceive the laity by giving them to understand their condition is serious, when it is not, and that marvelous cures have been brought about when nothing serious ailed the patient.

Untoward results may, and doubtless do, result from such unnecessary alarms. I cannot silently approve of or be a party to such deliberate falsifying, which is done for the purpose of gaining self-glory, and believe it to be as bad or worse than publicly advertising for patients. It can only be done for notoriety, for the purpose of enlarging the clientele of the doer, but done by false representations. I believe it proper and right candidly to state to the intelligent patient the true condition of his physical state, except in rare contingencies. I also believe such candor often aids the cure; and I deprecate any deceit, particularly that which may lead to the continued illness or a prolongation of the disability of a patient, by reason of premediated misstatement of facts.

The object I had in view in the foregoing remarks, which may seem severe, was the desire to elevate to a higher plane the practice of medicine, to give publicity to my condemnation of what seem to me improper and unbecoming practices;—to express my sense of the duties devolving upon us as physicians; to accept and adopt all means looking toward the successful practice of our art; to urge the necessity of doing anything and everything which may in the slightest degree assist us in becoming more successful in combating disease and relieving the many ills to which poor humanity is the heir.

Let us, therefore, be enthusiastic but honest practitioners, truthful to our patients, true to ourselves, and diligent in fulfilling the grave responsibilities which rest upon us as conservators of the public health.

ADDRESS IN OBSTETRICS.*

THOS. D. DUNN, M. D., West Chester.

A resolution adopted by this Society in 1871 provides for an annual address in obstetrics, reviewing the progress during the preceding year of this branch and collateral sciences.

When your President extended this honor to me, I was ignorant of this by-law, and when it was first discovered, the difficulty of complying with the spirit and the letter of the law in the time allotted seemed well-nigh insurmountable; a hasty examination of previous addresses in obstetrics showed many deviations from this rule. This is not mentioned in a spirit of criticism, but to induce a charitable consideration of the present attempt.

The frequent publication of reviews of medical progress, annuals and compendiums, makes this work unnecessary. To review the contributions to obstetrical literature is no easy task; and from the vast amount of material it is difficult or impossible to always decide which is really valuable, and which time and the light of experience will prove worthless. Old things that have long been weighed in the balance and found wanting are frequently resuscitated by new aspirants to fame, clothed in new form and presented as novelties. Occasionally, however, one that has been relegated to oblivion is brought forward and under the light of a new age, and under new conditions proves to be golden grain and not chaff. The time alloted will scarcely permit the mention of all the good things that have been written, but it affords an opportunity to refer to a few important subjects.

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* Read before Penn. State Medical Society, 1893.

During the past year considerable attention has been given to the use of anesthetics in labor.

No argument would seem necessary at this time to justify their use to relieve the mental and physical suffering of childbirth, were there not a goodly number of physicians who do not use them at all, or only in instrumental deliveries. Within a year I have heard a general practitioner who has had a fair practice, and who is a member of the State and National Societies, announce to a body of medical men that he never used anesthetics, even in forceps delivery.

But the prejudice of the past has happily largely disappeared, and the superstition that once existed, that labor being a physiological process, and the suffering therefore natural, should not be interfered with, has fortunately been abandoned.

Whenever there is pain, whether the result of physiological functions, diseased conditions or surgical procedures, humanity demands its relief. The aversion to the use of anesthetics which is often caused by fear of ill-effects is usually easily removed, though this fear is too frequently encouraged by the timid and unskillful attendant. It is true anesthetics sometimes have a depressing effect and may increase the tendency to postpartum hemorrhage, but these untoward results depend largely on the manner in which they are employed. In surgical operations, if profound anesthesia is induced, the tendency to both primary and secondary hemorrhage is increased, and there may be marked disturbance of respiration and circulation. These dangers exist also in the use of anesthetics in labor, but they should not be condemned in the latter class of cases and approved in the former. That they are improperly given by some should not interfere with their administration by the skillful. Except in cases of version, abdominal section, symphysiotomy, and rare forceps deliveries, complete anesthesia is seldom required.

For their intelligent use it is necessary to recall for a moment a few facts in the physiology of labor. The nervous supply of the uterus is such that its rythmical contractions are carried on independent of volition—the source of this supply being the ganglionic centers of the spinal cord. Their action may, however, be inhibited by the higher cerebral centers, as, for example, in the suspension or irregularity of uterine pains as the result of fright, the sudden arrival of an unwelcome medical attendant or nurse, shock or exhaustion from prolonged suffering. During the nervous excitement of conscious pain, uterine contraction is often feeble or may cease altogether, and it is not uncommon to see dilation arrested for hours.

Who has not repeatedly seen a few whiffs of chloroform quiet this excitement and strong regular uterine contraction follow and labor be brought to a speedy and successful termination? Here the cerebral excitement inhibits the nervous mechanism of uterine contractions, and this excitement the anesthetic removes. The spinal centres are then free to restore the rhythmical contraction of the uterus.

The relaxation of an anesthetic also lessens the tendency to injury of cervix and perineum. By relieving the violence of the suffering by partial anesthesia, the voluntary assistance of the mother is under the control of the physician—a condition necessary to the successful management of delivery.

Dr. Edward P. Davis, in *Philadelphia Polyclinic* for April, in an article on "Anesthetics in the Treatment of Labor," thus strongly states their advantages:

"In prolonged and difficult labor, some of the greatest dangers which threaten the mother and child may be lessened by the skillful use of anesthetics.

"The element of shock may be thus lessened or prevented. Exhaustion of the uterine muscles, the greatest predisposition to hemorrhage, is far less frequent when anesthetics are employed. Injurious pressure upon the child less often occurs when the forces of labor are regulated and controlled by partial anesthesia. The facility afforded in diagnosis and operation to the physician from the use of an anesthetic is a fact too familiar to require discussion."

A comparative study of anesthetic agents which are employed in parturition has been made by Chaigneau (*Journal de Medicine de Paris,* Apr. 19, 1892). He believes antipyrin has given but moderate results. Chloral is often uncertain, unless used in large doses, which frequently cause gastro-intestinal irritation. Lord (*Omaha Clinic*, Oct. '92) advises it in all cases where an anesthetic is required, except where there is great cardiac weakness. It frequently relieves the teasing pains in the first stage of labor, and prevents the exhaustion of the mother.

Cocaine has been employed successfully by Jaenne in 5 per cent. solution applied by a tampon to cervix and vaginal cul de sac. Doléris uses a 4 per cent. cocaine ointment with much advantage. Auvard recommends the injection of 15 to 20 minims of a 5 per cent. solution of cocaine in each *labium majus* a few minutes before delivery, which greatly lessens the suffering of this stage.

Chloroform, as stated by Parish in his review (Sajous, *Annual of the Universal Medical Sciences,* 1892), seems to be the favorite anesthetic of most writers, and he expresses his surprise, in view of its many advantages and few dangers, that it is not used more frequently. He believes the condition of syncope is the only contra-indication for its use.

Acute or chronic disease of lungs, heart or kidneys ought not to deter the careful physician from its judicious employment. Under the prudent use of chloroform the rapid, feeble, nervous pulse of the person in labor will become steady and full. It is indicated in cases where the pains are severe and badly borne, where the uterine contractions are irregular, where there is marked rigidity of the cervix and firm resistance of the perineum.

Its tendency is to lessen rather than increase the danger of post-partum hemorrhage—a direct result of diminishing uterine exhaustion, and it has been my experience, as well as that of others, that it is not uncommon to see what was considered a complicated labor speedily converted into a normal one by its use.

For my part I resort to partial anesthesia by chloroform in a majority of my parturient cases, and I have yet to see any ill-effects from its use. Our duty in a mother's hour of trouble and peril is not alone confined to safe delivery of the child —human suffering demands relief.

In operative procedures, as in difficult forceps deliveries, post-partum hemorrhage where interference is required, abdominal section and symphysiotomy, ether is doubtlessly safer and better. A careful discrimination should be made between ether and chloroform in cases requiring complete anesthesia.

The past year will long be remembered in the history of obstetrics on accout of the introduction of symphysiotomy in America. At the last meeting of the American Gynecogical Society, Dr. Harris, of Philadelphia, read a paper calling the attention of the physicians of this country to the marvelous results of this operation in Italy. This article made such an impression that the operation became at once popular, and many successful cases have been reported. A brief history of the operation may not be out of place here. It was first performed in France on the wife of a French soldier by Jean Rene Sigault in 1777. It received a favorable consideration in Italy, but was rejected in Germany and England.

From this period to 1858, Dr. Harris collected seventy cases, with a death rate to mothers of 37 per cent., and to children of 67 per cent. In spite of this high mortality to both mothers and children, Professor Morrisani, of Naples, revived the operation, and from 1866 to 1880 he and other Italian obstetricians performed the operation fifty times, reducing the mortality of mothers to 20 per cent. and children to 18 per cent. From 1881 to 1885 fifty-two cases were operated upon, with the fearful mortality to mothers of 44 per cent., but the loss to children was reduced to 13.5 per cent. The genius of Morrisani was not doubted by these discouraging figures. He worked quietly and persistently in perfecting the operation under antiseptic management, and in Naples, from January, 1886 to January, 1892, it was performed in twenty-eight cases with the lost of but one mother (from causes not traumatic) and three children.

During this period the success of the Sänger Cæsarian method in other countries caused it to supplant symphysiotomy, but the knowledge of the good work done in Naples, after January 1, 1892, spread to

France, Germany, Russia, Ireland and America. Since then we have been on the crest of a symthysiotomy wave. Repeatedly had Morrisani written on the subject previous to this, but he preached to deaf ears outside of Italy; he must now, however, realize the highest fulfilment of his hopes. During 1892 the operation was performed at least 40 times with the loss of but one mother.

The following is the list of the American operators in their chronological order: Jewett, of Brooklyn, Sept. 30; Hirst, of Philadeiphia, Oct. 3; Broomall, of Philadelphia; Michael, of Baltimore; Noble, of Philadelphia; Springle, of Montreal; McKennan, of Paris, Ill.; Garrigues, of New York; Duff, of Pittsburgh; Lusk, Coe and Grands, of New York.

Thus, since Sept. 29, 1892, the operation has been performed 11 times in the United States and once in Canada, saving all the mothers and nine children.

During the year 1892 (*Annales de Gynecologie et Obstetrique*, Jan., 1893), Pinard performed symphysiotomy 8 times, and his associates in the Baudelocque Clinic of Paris 5 times—13 cases in all. All the women recovered and the pelvis in each instance united solidly, and they made perfect recoveries in every particular, while only three of the children perished. It is the consensus of opinion that the operation should be limited to flat pelves with a conjugate diameter between 2¾ and 3½ inches, *i. e.*, a pelvis not so highly contracted that a living fetus cannot be delivered after the operation by version, or, preferably, the forceps. If the diameter be less than 2¾ inches, Cæsarian section should be selected, and version and the judicious use of forceps resorted to when between 3½ inches and the normal conjugate diameter.

Careful pelvimetry before labor, and the estimation of the size of the child's head *in utero* in its relation to the pelvis, will enable the obstetrician to make up his mind as to the course of labor, and decide what operation ought to be elected in each individual case to save maternal and fetal exhaustion.

Leopold (*Centrallblatt fur Gynakologie*, No. 30, '92) gives the following directions for the operation:

"The mother is placed upon a table with buttocks projecting. Two assistants hold the legs, slightly separated, with one hand below the knee, while the other presses the trochanters together. An incision is made through the skin from the upper border of the sypmphysis to 1 cm. above the clitoris. The soft parts are separated down to the joint; the insertion of the recti muscles is transversely divided only so far that the left index finger may be introduced behind the symphysis. The finger is inserted to the ligamentum arcuatum inferior and the joint separated by a blunt-pointed bistoury. The pubic bones immediately separate to 3 cm., and by careful separation of the knees and transmitted pressure on the trochanters to 7 cm., at any rate, so far apart that the large head immediately enters the superior strait and is easily and rapidly delivered by high forceps operation. The assistants immediately press the mons veneris so tightly together that the pubic bones touch. They are then united by silver wire sutures or strong silk along the soft parts and the wound closed. A strong and very broad binder, provided with buckles, holds the pelvis together for the next three weeks and is daily tightened. It is not necessary to separate the ligamentum arcuatum, nor, indeed, to cut through the entire symphysis, as after half or three-quarters separation the upper ends are 3 cms. apart. In pelves, in which, following rachitis the direction of the pubic symphysis and the upper sacral vertebra converge upward, also where the principal hindrance to the entrance of the head is the projection inward of the upper segment of the symphysis, it is necessary to open only so wide as the individual case demands."

The future of symphysiotomy is full of hope. Its advantages are not confined alone to the great reduction in mortality of mother and child. The profession is becoming painfully aware of the army of idiots, epileptics and cranks, the result of injuries to the brain of prolonged and difficult forceps deliveries. Cerebral injuries are almost as frequent after version in the extraction of the head.

Dr. J. M. Taylor (*Annals of Gynecology and Pediatry*, 1892) has called attention to the importance of this subject in an "Inquiry as to the Causes Producing Cerebral Injuries in the New Born." Embryotomy has ceased to be a justfiable procedure on a living child. The induction of premature labor in cases of contracted pelvis must be greatly restricted. Even with strict antisepsis, statistics show for this operation a death rate to mothers of 5.3 per cent., and of 45.3 per cent. to infants. This operation can therefore stand no comparison with symphysiotomy, which ought to have practically no mortality to mothers, and has less than 10 per cent. to children.

Present indications are that the integrity of the symphysis pubis is completely restored in three or four weeks after the operation. The remote effects of injury to the birth-canal in symphysiotomy are much less than in version and difficult forceps deliveries. The brilliant results of the Porro and Sanger Cæsarian operations have been confined to the most skillful hands in the large cities and hospital clinics. Their advantages have thus been denied the majority of these unfortunate cases. In choice between section and embryotomy the vast majority of rural practitioners will choose the latter. The simplicity and ease with which symphysiotomy is performed will extend its advantages to villages and country districts. Thus many women and children will be saved by physicians who would not undertake a section.

For these results one man and one country deserve all praise—Morrisani, of Italy, gave us symphysiotomy.

So much has been said and written during the past ten years in favor of antiseptic midwifery, it would seem unnecessary to introduce the subject here, but as long as there is puerperal infection in private and hospital practice, and there are physicians who fail to give their patients the protection of rational antisepsis, this war against sepsis must go on. There must be no indifference in the matter, and even at the risk of reaching the point of "mental saturation" to many, no argument should be withheld while any man refuses to be convinced.

In hospital practice, since the introduction of antisepsis, there has invariably been an enormous decrease in morbidity and mortality.

Dr. Joseph Price has had over 1200 cases of labor at Preston Retreat, Philadelphia without a death from any cause. Before delivery the patient is thoroughly washed with soap and water and given a single 1–2000 bichloride vaginal douche, which is repeated once on delivery of placenta.

Garrigues (*Med. News,* Nov. 26, '92) gives the following results of the new treatment in the New York Maternity Hospital:

During the nine years previous to its introduction (1875–1883), 3504 women were confined, 146 of whom died, *i. e.*, 4.17 per cent., and of these 17 or 17.17 per cent. succumbed to sepsis. During the last month of this period the total mortality reached even 20 per cent., and that from infection 15.69. During the first three months after the change—from Oct. 1, 1883 to Jan. 1, 1884—there were 102 deliveries without a single death, and from Jan. 1 1884 to Jan. 1, 1891, 3170 deliveries with 30 deaths, 7 cases succumbing to sepsis. Thus the total mortality has been reduced to between one-fourth and one-fifth of what it formerly was, it now being less than 1 per cent., and that from sepsis less than one-fifth per cent.

The records of the Sloane Maternity (Dr. Jas. W. McLane, *Am. Jour. Obstet.*, 1891) show that in 1000 cases, 6 cases were lost and only 1 from sepsis, or one-tenth of 1 per cent.

Braun (Herzfeld, *Central. f. Gynäk*, 1890), at the Vienna Clinic, had 1004 consecutive cases with only 2 deaths. Many other hospital statistics might be cited, showing equally satisfactory results.

The value of internal disinfection before delivery has been debated much in the past few years, especially in Germany. Some have carried antiseptic measures to such extremes that they become burdensome and even injurious.

Thirty deaths from poisoning have been reported, the result of the immoderate use of bichloride injections. It is natural that this announcement should be followed by a reaction against internal disinfection.

One French writer (quoted by Garrigues, *loc. cit.*) went so far in his antiseptic zeal as to require bichloride injections (1 to 2000) twice a day, beginning four weeks before delivery. The week previous to confinement they were given every other day and the vagina tamponed with iodoform gauze. The injections were also continued after delivery.

Mermann (*Central f. Gynäk.*, 1892) has had 700 cases with but one death, and that from rupture of the uterus. He conducts labors without internal disinfection, but his practice is to make no internal examination in uncomplicated cases.

Leopold, Glöekner, Keller and others think that internal disinfection before delivery increases both mortality and morbidity.

Frommell (*Deut. Med. Woch.*, 1892, No. 10), on the other hand, believes in an internal injection of bichloride as a prophylaxis of puerperal disease. He finds no increase of sepsis from frequent examinations by students in his clinic when this precaution is taken. When he relied on external disinfection, puerperal infection occurred.

Hoffmier (*Deut. Med. Woch.*, 1891) advocates the disinfection of the birth-canal before delivery, and shows from comparison of the statisties of Wurzburg clinic with those of others that it is not a source of danger to the mother, but, on the other hand, even with the examinations of students, it diminishes puerperal disease.

Steffeck (*Zeitschrift f. Geburt. Gynäkol.* Bund XX, Heft 2) has made a bacteriological study of the secretions of the vaginal canal in 29 healthy women before delivery. The secretions were examined, cultures made and both injected in animals. Twelve cases gave positive results, abscesses followed in seven, and in five general puerperal infection. The germ most frequently found was the staphylococcus pyogenus albus. He concludes that this germ, as well as streptococci, may cause puerperal infection which should be considered an auto-infection, and strongly urges the prophylactic douche before delivery.

Garrigues (*loc. cit.*) very pertinently denounces the extremes of these views, and advocates a single vaginal injection before delivery, to wash out germs and dirt.

Antiseptic treatment of puerperal women can be made both simple and effective. The patient should have a hot bath and the external genitals thoroughly washed and disinfected. There should be a single vaginal injection before delivery of simple boiled or borated water, or a solution of bichloride, 1 to 2000, or a 1 to 2 per cent. creolin solution. The physician and nurse should wash hands (also arms in case of section) thoroughly with the indispensible nail-brush, and disinfect with 1 to 2000 bichloride solution. If lubricants are used (which is seldom necessary), they should be aseptic. After the birth of the child, in normal cases, the vaginal tract should not be examined and disinfection is not required. If portions of placenta remain, they must be removed, and, as in cases of instrumental delivery or version, the birth canal and sometimes the uterus itself should be flushed with an antiseptic douche. Instruments should be boiled or rendered antiseptic by strong solutions.

Probably among the uncleanly, in private as well as in hospital practice, disinfection of napkins or pads would be safer.

The benefits of antisepsis in hospitals have been repeatedly demonstrated beyond all doubt. While there may be slight variation in detail, it is practically the same in all. Every woman, in private practice, about to become a mother, should be surrounded by the same safeguards the poorest and filthiest have in hospitals. Too frequently the woman who has all the comforts and skill money can secure, is not protected by the physician from the poison that lurks in the private dwelling. The treatment is simple and materials inexpensive, and it is a crime to receive compensation for our work, as well as a violation of the sacred though unwritten pledge of the physician, if these precautions are neglected.

In conclusion, I wish to add a few pertinent quotations from that classical essay on the Contagiousness of Puerperal Fever, by Dr. Oliver Wendell Holmes.

It was read before the Boston Society for Medical Improvement, and printed in the *New England Quarterly Journal of Medicine and Surgery* for April, 1843, reprinted with additions in 1855, and appears in his "Medical Essays." It should be read by every physician who enters the sacredness of the lying-in chamber.

"For my part I had rather rescue one mother from being poisoned by the attendant, than claim to have saved forty out of fifty patients to whom I had carried the disease.

"God forbid that any member of the profession, to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly or selfishly.

"Let the men who mould opinions look to it; if there is any voluntary blindness, any interested oversight, any culpable negligence, even, in such a matter, and the facts shall reach the public ear, the pestilence carrier of the lying-in chamber must look to God for pardon, for man will never forgive him."

I beg to offer to this Society the following preamble and resolution, which I sincerely hope may be adopted:

"WHEREAS, Experience, both in this country and abroad, shows that by strict antiseptic measures the mortality in lying-in hospital may be reduced to a minimum, and

"WHEREAS, Deaths due to child-birth are yet too common in private practice;

"*Resolved*, That, in the opinion of the Medical Society of the State of Pennsylvania, it is the duty of every physician practicing midwifery to, as far as possible, surround such cases in private practice with the same safeguards as are being used in hospitals."[1]

Short Articles Preferable in Live Medical Journals and Medical Societies.

If busy members of the profession realized how easy it is to make note of important features in important cases while engaged in their round of work, and then to arrive at conclusions regarding same, there would be more of it done, and as a result therefrom short, terse contributions might easily often be made to medical journals and to medical societies. An immense amount of time is often wasted by the writer in approaching his subject. Unnecessary side-issues are brought in and valuable points are frequently lost in a world of words. Too many men in preparing a paper feel that it is their duty to give the views of all who have preceeded them, and then in a labored way to present their own. Far better would it be if they would adopt the rule in their contributions of making one point at least, and making that point so distinct, definite and permanent as to enable one to hang his hat on it.

The chairman in the section on Diseases of Children of the New York Academy of Medicine, Dr. Wm. P. Northrup, recently (*N. Y. Med. Jl.*) sent to members of his section suggestions for the preparation of papers as follows:

1. "Hippocrates and Galen may be passed with slight notice, as they have been dead for some time and their opinions are somewhat obsolete.
2. Scratch out the formal introduction, and begin where the subject-matter really begins.
3. Condense the body of the paper.
4. End the paper where the subject-matter ends, making its action like that of the piston syringe—begin, spatter, stop."

Yes, let every contributor begin promptly. Let him spatter as little as possible and then stop promptly. Some philosopher once said that "he is a fortunate man who knows when to retire from the salon and the world." He might well have said: He also is a fortunate man who, when contributing an article to a medical journal or a medical society, knows how to begin and knows when to stop.—*Med. Mirror.*

A Peaceable Race.

The Japanese manner of settling quarrels is original. When one man has offended another, the injured party gives notice that he is angry by drawing in the sand before the door of the offender a circle with a straight line across it, indicating that his affection, which would have been eternal, has been cut in two. Friends of both parties then shut them up. They parley awhile, then pretend to be born again, prattle as little children, and finally as men become reconciled and embrace. Should one be refractory and refuse to be conciliated, he is ostracized by the community so effectually that he is soon brought to terms. It is just possible that our enlightened citizens might consider this method better than knock-down arguments and certainly much cheaper than going to law.—*Harper's Bazar.*

A Sure Preventive.

Bridget. "Phawt's t' privint me tellin' yure mother on yer, Tommy Barker, shtealin' caake loike a thafe?"

Tommy. "Honor, Bridget. Didn't you kmow there was honor among thieves?
—*Harper's Weekly.*

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[1] This preamble and resolutions are nearly identical with those presented by Dr. Henry J. Garrigues, at the section on Obstetrics and Gynecology of the New York Academy of Medicine Oct. 27, 1892, and unanimously adopted.

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SATURDAY, SEPTEMBER 16TH, 1893.

EDITORIAL.

INJUDICIOUS HOUSE QUARANTINE.

That there has been advance in medicine, surgery and hygiene in recent years can not be denied. The advance has on the whole been direct and continuous, but at times it has been interrupted, and sometimes there has been retrogression. This is especially true of the present practice, in the supposed interest of public sanitation, of domestic quarantine of houses and their occupants on account of the presence of one or more cases of diphtheria or scarlet fever or similar disease. Aside from its enforcement in the over-crowded "poor districts" of great cities, the practice is often ill-judged, often worse than useless, sometimes injurious and not rarely cruel and barbarous.

There seems to be a growing tendency to exaggerate the danger of contagion in such cases. The risk of infection from personal contact is very small. That nurses and attendants on such cases rarely acquire the disease is a matter of history. Unless the association is close and continuous, as by occupying the same room or bed, with absence of ventilation, it is rarely seen. The evidence that these diseases are conveyed by fomites or carried by attendants on their clothing or otherwise to outsiders is not such as to satisfy scientific requirements. Anyone of much personal experience must have seen how seldom these diseases spread, even to other members of the family, if care in separation and ventilation is insisted on, and personally we have never known a case where the physician carried them from his patient to other families. It appears that the present notion of the communicability of these diseases, which seems to obtain with many physicians, does not come from study and reflection upon past experience, but from theoretical fancies about pathogenic germs and *a priori* generalizations, reasoning from the microscope and culture medium to the sick-bed instead of the reverse.

The tendency seems to be developing into something like a sanitary panic, and the consequences cannot but be deplorable.

The health authorities in many states have been empowered by law to require physicians to report all contagious diseases to local boards of health, and penalties are attached for neglecting to make such report, and this report is required immediately, often before a correct diagnosis can possibly be made. This is a direct bid to report as a contagious case every sore throat, red rash, or fever. Such a course may be forced upon the honest practitioner as a precaution against annoying prosecutions, and it may be gladly resorted to by the less scrupulous as an advantageous business operation, for every sickness reported as contagious and cured redounds to the credit of the attending physician, and deaths are condoned by the name of the disease. That the reporting of these diseases to local boards of health might be of some use in enabling the cause of infection to be located we do not deny, but we feel like protesting against the practice of sending a so-called health officer—generally a police officer in buttons—to visit the houses where such cases are reported and placard them as pest houses, giving orders that no one shall be admitted, forbidding the family from going out for business, health or pleasure, and giving instructions as to the sanitation of such houses. This is absolutely unnecessary and cruel. It is barbarous to the sick, and their relatives and friends, and impertinent and discourteous to the attending physician. It causes great and needless fright to the families and alarm to the neighborhood, has a tendency to aggravate the disease in the sick, and renders other members of the family more likely to contract it from the depressing effect of fear. The practical imprisonment of all the residents of the house, cutting them off from exercise in the open air and from all the cheerful associations of friends, is an encroachment on personal rights which nothing but the extremist could justify. Its tendency is to cultivate in the community a feeling of timidity, cowardice and selfishness, which is to be deprecated, and it indirectly teaches the profession and the people to look for the causes of these diseases where they do not exist. The sewer inlets, cess-pools, kitchen drains and foul, close cellars are to be shunned—not unfortunate fellow citizens.

Contagia differ in their nature. It is fairly well proven that those of cholera and typhoid fever are respectively distinct and specific germs which are ingested in contaminated food and drink. Here the alimentary tract is to be guarded. Those of diphtheria and scarlet fever seem to arise from accumulated animal or vegetable matter in process of decay, favored by lack of light and by still air, and they commonly effect their contact with persons by germs floating in the air. If the air is in rapid motion they are blown away and become harmless. Here cleanliness and ventilation are paramount. These are quite different from the contagium of small-pox. This is personal, its habitat is man, and possibly the cow. No account of cleanliness in ourselves and our surroundings is of avail against this disease, and it may unquestionably be carried by fomites. But it is effectually prevented by vaccination and that is our only safe reliance, not house-quarantine which is necessarily uncertain. In guarding the community from contagious diseases we must not forget the natural history of the particular contagion in question.

Cholera is exotic, and its germs may be excluded by certain measures of national quarantine, but, when once imported, the food and drink are the things to be guarded, not persons. Home quarantining of individuals will not effect so much. Scarlet fever, diphtheria and typhoid fever are indigenous. These diseases will always develop when the conditions are favorable. Here the essentials are cleanliness, sun light and ventilation rather than house quarantine.

It is not wise to whip the stream to catch pigeons nor to beat the bush for trout. Before we press measures of sanitation that are grievous and burdensome to the community, let us at least be sure that we are right. Let us guard ourselves and the community from panic, and by no means become victims of sanitary hysteria.

TRANSLATIONS.

APPENDICITIS AND THEIR COMPLICATIONS FROM A SURGICAL STANDPOINT.*

The author, K. G. Lennander, reports 34 operative cases which were operated upon by him and his assistants between the fall of 1888 and summer of 1892. There was but one death which took place 5 weeks after the operation; cause pyæmia, caused by a small gangrenous portion of the intestine which had been overlooked during the operation. In 3 cases laparotomy with extirpation of the vermiform appendix was performed, in which diffuse peritonitis existed. In three other patients suffering from appendicitis, there were found 2 or more incapsulated intra peritoneal abscesses which were opened and drained, in only 2 of these was it possible to remove the vermiform appendix; of these 3 it was found necessary to make incisions through the vaginal vault and the colon. In 12 cases abscesses were found in the iliac fossa and in the lumbar region, an opening was made; 3 times extirpation of the appendix. Of the 9 remaining 3 have had returns and there was 1 death, which has been reported at the beginning. In 7 cases laparotomy and amputation of the ulcerated and gangrenous appendix; operation performed 40 to 60 hours after the begining of the attack, with the exception of 2, in which the attack had lasted 4 days in one and in the other 9 days.

Pelvic abscesses were present in three cases, one having discharged through the vagina and two through the large intestine. Amputation of the vermiform appendix was performed five times during the free intervals. Chronic appendicitis was diagnosed in one case and operation revealed an abscess of the appendix, while the adhesions between the ilio cæcal and the anterior wall of the abdomen were dense, these were released during the operation. As far as the author has been able to follow his cases the patients are all well; three still remaining under observation.

During this time two patients died of gangrenous appendicitis who had refused operation; one had an inoperable carcinoma at the head of the colon, and the other was supposed to be suffering from a perforating ulcer of the stomach, and this presumably giving rise to the existing perintonitis.

Etiologically the author speaks first of foreign bodies or fecal calculi, the latter according to his idea forming in the appendix (not in the cæcum as Talamon teaches); further he believes in the possibility of a retention of the secretions, aided by the swelling of the mucous membrane and particularly assisted by a bend or constriction of the bowel. The author has observed this in one case in which he operated and later was able to palpate it in two cases before the operation.

The primary stercoral typhlitis was observed by the author in several cases and is there inclined to take the opposite view of Sahli.

Severe repeated attacks of appendicitis in which the pathological changes have been entirely confined to the vermiform process, and suppurative peritonitis in which there were only catarrhal changes of an unperforated vermiform appendix were also seen by the author. Lennander prefers the rectal amd vaginal examination. He has in several cases found the difference in temperature above the normal between the axillary and the rectal methods, which Madalung has found to be pathognomonic of suppuration in the lower portion of the abdomen or the pelvis. Lannander does not operate during the interval between the attacks, only at the express wish of the patient. He then opens down, releases all the adhesions which seems to him to be of pathological origin, and then invaginates the stump into the cæcum. If diffuse peritonitis is present a section is unavoidable, indeed strictly indicated; if the pus formed has become incapsulated he tries, if possible, to avoid opening into the free abdominal cavity and prefers to drain and with the aid of antiseptics feels certain that this method is less dangerous than to allow an unopened, undrained pus pocket to remain in the pelvic cavity. His incisions are usually in the median line or latterly. If the latter he directs his incision along the motor nerve in order to avoid hernia.

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*Translated for The Medical and Surgical Reporter by Marie B. Werner, M. D.

During the operation the author uses a warm solution of sodium chloride (sometimes twenty to thirty litres). If at all possible the appendix is removed and generally no intestinal suture is made, but closes the opening by the application of Peans forceps which are left in the wound, drainage of iodoform gauze is used between the loops of small intestines, Keiths glass drain is placed. The accumulative fluid is aspirated during the twenty-four hours, once in three hours, or oftener if necessary. Narcosis, at first chloroform by drops and later ether. The after treatment consists in small doses of morphia for the existing pain. To avoid symptoms of ileus the stomach and intestines are washed out; nourishment is given as early as possible and in rapidly increasing doses. If necessary warm enamata (500 to 600 g.) is given to check the thirst, once or twice daily.

The continuance of even slight symptoms of ileus is an indication, to the mind of the author, of more abscess or of fecal accumulations. As a rational treatment in cases of relapses of peri typhlitis Lennander recommends careful massage but only in the doctor's hands; this may also be the best method by which he will be able to gain thorough knowledge of the anatomical conditions present.—*Upsala Läkarenfören.*

ABSTRACTS.

CLINICAL THERMOMETERS.

The following abstract from the Report (1892-93) of the Managers of the Observatory of Yale University, is of material interest to the profession and will warn those physicians who put their trust in instruments of precision:

It continues to be true that only a small percentage of the instruments sold are sent to us for certification. It is presumably true, also, that those which are sent here for certification, by the manufacturers, are carefully selected, and, therefore, far more reliable than the avarage of those sold without certification. Nevertheless we are sometimes compelled to reject 25, 50 and even 75 per cent. of those sent us. As a rule, these are not rejected without receiving double the care and time required by the large majority of those to which certificates are accorded.

When there is taken into account the large percentage which the cost of certification adds to the manufacturer's prices, it is not to be wondered at that when he has succeeded in continuously producing, for a season, instruments with few and uniform corrections, he should point to these conditions as justifying his customers in accepting his instruments without other certification than his own. In those cases of this sort which have come under our observation, we have noticed that apparently the workman, when he no longer has occasion to expect his work to be traversed by a disinterested authority, soon relaxes his efforts at an accuracy which is hardly yet fully appreciated by the ultimate consumer, and his instruments, when they come to us from his customers, are not quite up to the standard maintained when he was continuously, or at short intervals, submitting them to such test: possibly he is not making due allowance for his changing standards.

It may not be out of place to again invite the attention of our puplic to some points in the construction of registering clinical thermometers, which are frequently overlooked by makers and users of these instruments.

In those forms where the index is a short column of mercury—one-third to one-half an inch long—separated from the rest of the mercury by a small bubble of air, the index is often lost by being thrown down into the bulb, the bubble escaping into the attenuated atmosphere of the tube, and when the index is restored the separating bubble is not likely to be of the same dimentions, and the temperature indications will not be the same as with the former bubble. The difference in the lengths of the tube occupied by the old and new bubbles will account, approximately for the differences in the readings. The bubble should always be as small as is consistent with its function of separating the columns of mercury. The tube should extend sufficiently beyond the maximum readings required, that the compressed atmosphere at the top of the tube may not force back the index, when the support of the mercury in the bulb is withdrawn by cooling.

In those forms where the "Indestructible index" is maintained by a "trap" near the bulb, the various constructions of this trap may, at certain points, cause the index to drop irregularly when the mercury below the trap has contracted, or may occasion a motion of the index by jumps: in fact in most of the reliable instruments of this form, it is merely a question of the number of jumps taken by the index in rising one degree;—most of those in which the index rises perfectly smoothly and without jumps, will justify the suspicion that the index will drop, as soon as the mercury in the bulb contracts from the trap. While the index is rising freely the motion may appear continuous, but when the index is within a degree or two of coming to rest and rising slowly, the jumps may, usually, easily be counted. Our recent practice has been that, when these jumps average 0°.1 or less, and the readings repeat themselves, throughout, within the prescribed limit of accuracy, the usual certificate is given: if the jumps avarage more than 0°.1 and less than ⅛°,—the readings repeating themselves as before, we modify the certificate by making the limit of accuracy "0°.2" on the same certificate form: and when the jumps average more than ⅛°, we give no certificate. The process of producing the trap leaves its walls in a somewhat unstable condition, so that moderate concussions may cause particles of glass to separate, which particles, acting as a plug, may temporarily sustain the index, which, when the plug is dislodged may drop. The contraction here is so small, and the particles of glass so fine, that it is not always easy to detect them. The same dropping of the index may be due to the varying effect of air in the trap.

One of Bismarck's Habits.

Once when Bismarck was a cavalry officer he was standing with some other officers on a bridge over a lake. As he was about to give an order his groom, Hildebrand, rode one of the horses to water close by the bridge. Suddenly the horse lost footing, and Hildebrand, clinging to the animal disappeared with it in the water. Before the other officers could collect their senses Bismarck had cast off his sword and his uniform and had thrown himself in the lake to save his servant. By good fortune he seized him, but the man clung to him so closely in his death agony that he had to dive before he could loose himself from him. Bismarck rose to the surface, raising his servant with him, and brought him safe to land in an unconscious condition. The next day the servant was as well as ever. But the little town that had wittnessed the brave rescue was in great commotion. They petitioned the superintendent, who obtained for the young officers the medallion "for rescue from danger." And now on great occasions, the well known Prussian safety medal may be seen beside the proudest stars in Christendom on the breast of the famous creator of, united Germany. Bismarck, it is said, is prouder of his first medal than of all the rest put together. One day in the plenitude of Bismarck's power a noble minister approached the premier, and with a tinge of satire asked him the meaning of this modest decoration. He at once replied: "I am in the habit sometimes of saving life." The diplomatist lowered his eyes before the look which accompanied Bismarck's lightly spoken words—*Chicago Herald.*

THE LIBRARY TABLE.

BOOK REVIEWS.

An American Text Book of Surgery for Practitioners and Students. Edited by William W. Keen, M. D., and J. William White, M. D. Pp. 1209. Philadelphia: W. B. Saunders, 1892.

This volume represents the work of thirteen American Surgeons, all well known professors in as many as twelve medical schools of this country.

One great objection to this work is the fact that its articles remain unsigned; yet those familiar with the recent contributions of a number of these authors to the medical press cannot help but be impressed how closely they resemble the text, in fact some of them tally line for line with a number of reprints distributed to the profession.

"As may be expected," says Mr. Frederick Treves, of London, in his review of this work, " the quality of the different articles varies considerably, and the fullness with which the individual subjects are discussed is not to be measured by one standard. Undue prominence has been given to certain surgical matters, while others of less immediate interest, but of no less importance, receive too scanty a treatment."

The book opens with an article on Surgical Bacteriology which, while interesting to most readers, is of little use to the practicing surgeon or physician. It is not sufficiently comprehensive and thorough. For instance, the text states that dry heat of 212°F. will in 1½ hours kill bacteria. This would be misleading to the ordinary medical reader as it implies that dry heat 212° F. will produce sterility, whereas, should the mass contain spores, which fact no practitioner can determine, the spores would remain in full vigor and reproduce this kind when introduced into a favorable soil. Again in speaking of mercurial chloride: Koch is quoted to the effect that corrosive sublimate 1 to 1,000, destroys the most powerful organisms in a few minutes. This in the abstract may be correct; however, it will not do for practical surgery where albumins are generally present. This was long ago demonstrated by Professor La Place and others; the fact being that albumen will break up the mercurial chloride into its constituant parts and thereby destroy its germicidal qualities to the degree necessary to satisfy the albumen present; therefore for practical work the solution must be used much stronger than 1 to 1,000, or tartaric acid added as suggested by Dr. La Place.

The attempt to teach the practitioner how to stain bacteria is another instance of want of thoroughness to make it of use to either the student or surgeon.

The statement is made on p. 677: "Vomiting takes place as frequently in wounds of the abdominal parietes and in simple penetrating wounds as when the viscera have been injured." This is an error as vomiting is quite common in visceral injuries, but is exceptional in penetrating wounds without visceral injuries, *e. g.* A gunshot wound entering the abdomen, penetrating it and lodging in the dorsal muscles, nausea is absent; but a wound of the stomach or ilium is followed by the most persistent nausea. Again, on p. 680, under the head of "Preparation of the Patient," attention is called to the use of "atropia and morphia;" this in the hands of the most advanced operators has been strongly condemned as it gives very often a restless and uncontrollable patient. On p. 681, in discussing length and point of incision a long incision is again recommended, this incision is not practiced by expert operators; it increases the shock, loss of blood, exposure of viscera and undue manipulation to control of viscera; it necessitates the crowding of the ether to profound anæsthesia which should be avoided in all such cases. On p. 683, the use of sponges taken from chemical solutions is harmful; in fact the sponging of the peritoneal cavity at all does mischief. On p. 704, "Puncture of the Intestine" here is recommended, a procedure that is now considered not only uncertain—but a dangerous practice in the hands of anyone. On p. 789, "Ventral Hernia." This important subject does not receive the attention that it deserves; on account the number of abdominal operations in the hands of the inexperienced and careless operators ventral hernia has become very common, so much so, that a more thorough and detailed account should have been here given. The surgery of ventral hernia is new, trying and difficult.

In treating of diseases of the eye about as little has been written as could be written for the enlightment of the "Medical Profession and Medical Student of America" when it is remembered that but comparatively few general practitioners would undertake the operations for glaucoma, cataract, and the various plastic operations upon the eyelids. We cannot do an injustice to the solitary chapter of forty pages devoted to the subject if we quote its opening words. "In a brief article on the surgery of the eye it will be impossible to include its anatomy, physiology, pathology, therapeutics and the means of examination by instruments or glasses, or to do more than mention the causes that render a resort to surgical procedure necessary, and describe the various operations themselves. All reference to the diseases of the choroid and retina are omitted, as they belong rather to ophthalmic medicine than to surgery." This may be technically correct, but we might have reasonably expected a description of the ophthalmoscope and the method of using it. Such knowledge is certainly requisite for the modern ophthalmic surgeon. It seems somewhat inconsistent that reference should be made at some length to " paralytic squint due to disease involving the nerve centers or trunks or rheumatism." What does it avail a student to be told that glaucoma occurs especially in the hypermetropic, and that at the sclerotic ring we may "find with the ophthalmoscope" "the characteristic *cupping* of the papilla" when he receives no hint either as to the nature of hypermetrophia, or the use of the ophthalmoscope? It would seem as if all helpful reference to instruments of precision for diagnosis were omitted from this work, leaving the student to search elsewhere for descriptions of the laryngoscope, rhinoscope, ophthalmoscope, endoscope, etc. What information as to diseases of the eye is vouchsafed, is accurate and reliable, but it manifests haste in preparation, is curt in diction, and includes references to "astigmatism," "stenapaic slit," and "high convex cylinders" which must be utterly unintelligible and bewildering to the student. Pp. 1108, which is devoted to the statistics of eye diseases might have been more profitably utilized for a short account of the ophthalmoscope or even a brief description of the anomalies of refraction and accommodation.

Chapters VI and X are so very unsatisfactory that they had better have been omited altogether. The work contains 37 plates and 437 wood cuts. Of the wood cuts, claim is made for 52 as original. Dr. Shadd, Professor at the Howard University Medical College, Washington, D. C., calls attention in the *Medical and Surgical Observer* February, 1893, to p. 198, "Enormous sarcoma of Buttock," says that he finds a photograph of his patient "taken from a duplicate picture of the cut, without any credit given to the Freedman's Hospital where the patient was for several months under treatment, and where the true type of the disease was diagnosed." This error can readily be set right in the second edition should the demand require one, together with other claims for credit.

A Manual for Boards of Health and Health Officers. By Lewis Balch, M. D., Ph. D., Secretary State Board of Health of New York; Health Officer of Albany; Emeritus Professor of Anatomy and Professor of Medical Jurisprudence, Albany Medical College. Banks & Brothers, Albany, N. Y. Price $1.50.

The Secretary of the State Board of Health, Dr. Lewis Balch, has prepared a Manual for the use of members of local Boards of Health, Health officers and all others interested in health matters. The book is exactly what it purports to be, a practical working Manual. It defines the powers of the State and local boards, it contains directions to the local health officer, it gives examples of problems which may arise and their solution, it offers suggestions for the prevention of disease and it includes directions to be followed in times of danger from epidemics of contagious diseases which formulate the best method of stamping these out which experience has devised. It solves many legal questions in the most plain and practical way. The value of the Vital Statistics gathered by the State Board is explained and the duty of those who are required by the law to fill out the certificates, is fully defined. Blank certificates, having the questions properly answered, are given as models to be followed. Bound with the Manual is a copy of the Public Health Law to which it is designed to serve as a Commentary. The volume will be found to be of the greatest value to all who are interested in the Public Health and it will enable Boards of Health and Health Officers to be certain of their positions in their dealings either with their Municipal governments or with the people.

PERISCOPE.

MEDICINE.

Gangrene Complicating Cholera.

Durr (*Rev. de Med.*,) first refers to the great rarity of this complication. He relates the following case in a man, aged 50, who had been suffering for some time from dyspepsia, and who was greatly afraid of cholera. On September 19th he was seized with premonitory diarrhœa, and two days later he was suffering from a typical attack of cholera. The reaction appeared on the 22nd, after which the patient, without permission, got out of bed. He was then seized with pain in the right leg, and the next day, ecchymoses appeared on it, and there was an absence of warmth and sensation. On the following morning the toes were gangrenous. On the 28th he died, the gangrene having extended nearly up to the knee, and no line of demarcation having formed. Only the leg was examined after death, and nothing was discovered besides, perhaps, some narrowing of the posterior tibial artery. The author then refers to twelve recorded cases, including another of his own. The gangrene may be dry or moist. Of the twelve, three were examples—all fatal—of moist gangrene (Mouchet), including two necropsies. In the other nine it was dry, and only two recovered. In these dry cases the arteries supplying the gangrenous area was obliterated. Thus this obstruction is constant, but there are three possible ways of explaining it: (1) embolism, (2) parietal arteritis, and (3) localized arterial spasm. Potain says that in enteric fever there is often spasm of the arteries of the limbs, but, if death occurs, the artery is found permeable. Varcot has insisted on arterial spasm in cholera; thus in one case the left pulse was imperceptible, but later it could be felt. The spasm may cease, or be the first stage of obliteration. In the author's case of gangrene in the hand, there were two distinct periods, one of spasm, and the other of obliteration of the artery separated by a remission, in which the arterial pulsation could be felt. Reasoning from other infective processes, the author is inclined to think that the arterial spasm is probably secondary to an arteritis, and is not a primary condition.—*Br. Med. Jour.*

Peptonuria in Phosphorous Poisoning.

Robitscheck (*Deut. med. Woch.*,) relates the following acute case from v. Jaksch's clinic. A girl, aged 19, took in solution the heads of five boxes of ordinary matches on November 27th. A few hours later there was vomiting and much pain in the epigastrium. On admission, (November 30th) she was apathetic, and still complained of much pain and vomiting. The conjunctivæ were slightly icteric, but the skin of normal color. Palpation over the liver and stomach regions was painful, but the liver could not be felt. The stomach was washed out with 8 litres of water, and then with a solution of copper sulphate—a method which has been used with good results in this clinic. Phosphorous was detected in the first washings. Albumen were present in the urine, and the deposit obtained by the centrifugal machine showed a few leucocytes and red blood cells. Careful examination proved the presence of abundant peptone. On December 1st, the skin and mucous membrane were yellowish. The patient was worse. There was no poikilocytosis or leucocytosis. The treatment consisted in the administration of sodium bicarbonate in large doses, potassic permanganate, and turpentine. The peptonuria was less marked. On December 2nd the liver was found to be enlarged and the icterus had increased. There was no destruction of red cells. No peptone was now present in the urine. The patient died the next day of cardiac failure. At the necropsy, the liver was found to be much enlarged, and abundant minute hemorrhages were present in the body. This case shows that peptonuria does occur in phosphorous poisoning. It differs from Maixner's observations, in which the peptonuria corresponded to the intensity of the symptoms, and gradually disappeared with recovery. Von Jaksch refers the peptonuria to the scorbutus. It is conceivable that it stands in relation to the hemorhages, and that the peptone appears as long as fresh and abundant hemorrhages occur in the body. It is important to prove the presence of peptone in the blood, but in this case the blood was only examined when the peptone was disappearing from the urine, and the biuret reaction was then doubtful.

SURGERY.

Massage in Muscular Rheumatism.

Graham (*Amer. Jour. Med. Sciences*, vol. cvi, No. 2, August, 1893), referring to lumbago, points out that this may arise from cold, strain, fatigue or rheumatism. Its pathology is probably coagulation of the semi-fluid contractile muscular substance, and adhesion of muscular fibrils, so that motion gives rise to partial, irregular and painful contractions. Retention of waste products occurs; the worst of these being uric acid. Recent cases of muscular rheumatism are almost invariably cured by a few massages. The same result may be brought about by rest, warmth, electricity, or the use of such drugs as salicylate of soda, though not so rapidly. Graham claims for massage five different actions, namely, mechanical, thermal, electrical, nervous, and chemical, and suggests that when a case of apparent muscular rheumatism not only does not yield but does not remain improved after a few massages, the probability is that the case is one of neuritis affecting the nerve fibres that supply the impaired muscles. This probability would be strengthened when the pain is uniform, affecting the same muscles on both sides, when it is worse at night, when at rest and warm in bed, and better when up and moving about; whereas muscular rheumatism is aggravated by motion and relieved by rest and warmth. Massage may thus be used as a means of diagnosis between muscular rheumatism and neuritis.

Riders' Bursa.

Le Fort and Albert (*Rev. de Chir.*) report four cases of a swelling near the knee, to which they give the name of riders' hygroma. According to these surgeons, there is often developed in horseriders a subcutaneous serous bursa seated near the inner surface of the knee, which is caused by the rubbing of this part of the limb against the saddle. This serous bursa, like the normal bursæ, cannot be made out in the healthy condition by ordinary modes of investigation. It sometimes becomes inflamed and swollen as a result of irritation, and there can be no doubt that this condition may run on to suppuration, although no case of this kind has yet been recorded. The situation of this bursa varies in different subjects according to the degree of outward turning of the foot during riding. Its most common situation is over the internal condyle, the center of the sac being a little behind the centre of this surface of bone. The tumor formed by the swollen bursa is rounded or oval, and usually presents the character of an ordinary hygroma. It is quite superficial, moves freely with the skin, has no direct connection with the bone, and, except in rare instances, does not communicate with the interior of the joint. It is by no means a troublesome affection. Acute or subacute inflammation of the sac will interfere, while the attack lasts, with the movements of the knee, but afterwards this restriction will soon cease. Chronic enlargement of the bursa will not impede either flexion or extention of the leg, and, unless the swelling be very large, will not prevent the rider from mounting his horse. This variety of chronic hygroma will, it is thought, be found of frequent occurence if attention be more widely directed to the condition. The treatment recommended is that usually applied to similar swellings in other regions, the method preferred by the authors being that of puncture followed by compression.

Electrolysis in Fibrous Ankylosis.

Gwyer (*Annals of Surgery*) draws attention to the great value of the galvanic current as a means of dissolving new-formed fibrous adhesions. The author usually uses one large flat electrode and one small sponge electrode with handle. The large electrode should be nearest the adhesions and attached to the negative pole, and the small one applied to the opposite side. Both electrodes should be wet with salt solution, and of solutions tried the best results have been obtained with a rather strong one of ammonium chloride. The current is turned on, and increased till the patient will stand no more. The older the adhesions, the greater the current necessary to dissolve them, and Gwyer believes in a strong current for a short time rather than a weak one for a longer period. The current should be applied from ten to thirty minutes at intervals of from one to five days.

New Method of Direct Fixation of Fragments in Compound and Ununited Fractures.

Senn (*Annals of Surgery*) makes an earnest plea in favor of a more frequent recourse to direct means of fixation in the treatment of ompound and ununited fractures. In preference to suturing, metallic spikes and screws, or ivory cylinders and clamps, Senn prefers, as absorbable interosseus splints, hollow perforated cylinders of bone introduced into the medullary canal; these do not interfere with production of callus, and are more quickly absorbed than ivory or metal. But the safest and most efficient means of direct fixation of oblique fractures is by bone ferrule, applied in such a way as to surround both fragments. Such a circular absorbable direct splint prevents to perfection lateral and longitudinal displacement, and rotation of the limb below and angularity at the seat of fracture must be prevented by plaster-of-Paris splint. Senn has employed this method in three cases with excellent results.—*Br. Med. Jour.*

OBSTETRICS.

Hæmophilia and Parturition.

Wehle (*Centralbl. f. Gynak.*) opened an important discussion on that question at the May meeting of the Dresden Gynecological Society. The patient, in a case under his own observation, was a primipara, aged 33. After being for ten hours in labor at term, she had rigors; the membranes had burst one hour previously; the fœtal head lay in the first position, in the outlet. Flooding had set in. Wehle gave morphine and waited one hour, then delivered by a single traction with the forceps. The peritoneum and clitoris (slightly wounded) bled freely, and so did several abrasions. The wounds were sutured. The placenta was extracted by expression, after free flooding. Three defects were noted on its surface. Hot water was injected into the uterus. Whilst this was being done the three missing pieces of placenta were removed. Ergot was given; the uterus contracted and the flooding ceased for a while, but the small abrasions, which had been sewn up, began to bleed, and deeper sutures had to be applied. Then the flooding set in again, and the uterus was plugged with iodoform gauze. A laundress's iron, placed over the middle line where there was a gap between the recti, served well to ensure counterpressure. The vagina required firm plugging, as the sutured wounds and the tracks of the sutures bled freely. The patient was in a state of collapse. In two hours, after taking stimulants, she rallied. On the third day the vaginal tampon, and on the fourth the uterine plug, were removed. For six weeks bright-red blood occasionally trickled away, and five weeks later she was very anæmic and rather weak. In the child the stump of the cord bled, though twice ligatured. Wehle found that the patient's father had been subject to epistaxis, and died, aged 42, of cerebral hemorrhage. One of his brothers was also troubled with epistaxis. One of the patient's sisters had flooding for a whole day when 18, and severe flooding after the birth of her third child; and her nose often bled. One brother (also subject to epstaxis) was seized, when 17, with pains in the joints, and died of extensive subcutaneous hæmorrhages. It further transpired that the patient herself, when 2 years old, bled freely from the genitals after a fall. When 12 she bled from the alveolus for a day after extraction of a tooth, and she had epistaxis and bleeding from the gums during her pregnancy. There was no history of syphilis or nephritis, no atony of the uterus, nor laceration of the cervix. The discussion turned on the diagnosis of hæmophilia from syphilis. Manuel saw fatal epistaxis in an infant, aged 3 days, notwithstanding careful plugging. The father had suffered from a hard sore. Meinert stated that the father was also syphilitic in a case where the stump of the cord bled for four days. Marschner recorded three labors where there was great flooding during the third stage, without any anatomical explanation. Professor Leopold attributed flooding in Marschner's ease to atheroma of the walls of the vessels in the uterine mucous membrane. When there was no hereditary history the obstetrician should not be too ready to attribute bleeding to hæmophilia. Mothers with syphilis often flooded in the third stage, and syphilitic children were subject to bleeding.

Labor Obstructed by Ovarian Tumor.

A. F. A. King delivered a white woman, an 8-para, aged 38, in a Washington hospital, in December, 1892. She had been over five days in labor, yet was not exhausted. The perineum was distended the anus patulous, and a tumor filled the pelvic cavity so as to leave only just enough space between its anterior aspect and the symphysis to admit two fingers by which the presenting part (the face) could be felt, just beginning to enter the pelvic brim. The tumor was so tense that there was doubt as to its being solid or cystic. King punctured it through the rectum, believing that rectal puncture would be less liable than vaginal to infection from the lochial discharge, and that the puncture would be less obstructed by pressure of the presenting part. Ovarian fluid free from odor escaped, with increased rapidity during the pains. When the obstructing mass had disappeared the cannula was removed, and with a few more strong pains the face descended, the chin swept round to the pubes, and a dead child was born, without further aid, in about fifteen minutes. The cord, 21 inches long, was flaccid and brownish. The placenta followed, and the patient recovered. A month later she was admitted into another hospital with fever, expectoration, and dulness with moist *rales* over the right lung. The tumor reached two inches above the umbilicus, and pressed downwards in the pelvis. The right foot was œdematous, and there was tenderness, without redness, along the femoral vessels. When the patient was under examination it gave way, a profuse discharge of fœtid pus escaping from the rectum. An incision was made in the posterior vaginal wall, and a gallon of offensive pus came away. A drainage tube was inserted, and the cyst cavity irrigated for three weeks. After staying two months in hospital the patient was discharged, the cavity had completely closed, and the lung symptoms were much better.—*Am. Jour. Obstet.*

Membranous Dysmenorrhœa and Uterine Casts.

Schonheimer (*Archiv. f. Gynak.*), in a memoir on the pathological anatomy and symptomatology of menstrual uterine casts, shows that the separation of a structure more or less like the entire endometrium in shape, is the result of chronic inflammatory changes. These changes cause the uterus to shed fibrinous structures in great quantity at the menstrual period. This phenomenon is never seen between the periods, and it gives rise to the disorder known as membranous dysmenorrhœa. Sometimes, but not necessarily, the exfoliation of membrane is accompanied by an acute local inflammatory process. Schonheimer relates two instructive cases. The first was a typical instance of membranous dysmenorrhœa. The patient was 29. The catamenia began at 17, and were painful, though regular, from the first. At 23 she married. Coitus was always painful. The left tube was slightly thickened. A fortnight after marriage she suffered from discharge, but it soon passed away. At the age of 25, and thenceforth till when she came under observation, the patient passed flat three-cornered casts at every period. Dysmenorrhœa was intense, and the patient was sterile. The membranes were purely fibrinous deposit, full of leucocytes. Here and there some uterine epithelium was seen entangled in the meshes of fibrine. The os was dilated and the uterus scraped. The scrapings consisted of true endometrium tissue, showing hyperplasia of the sub-epithelial connective tissue without any acute inflammatory changes. As is usually the case, treatment was unavailing, and the patient continues to pass casts of the uterine cavity. The second patient was 43. When a girl she was anæmic, and did not begin to mensturate till she was 20. The period was never regular till she married at the age of 26. She never had pain during the catamenial flow. She bore six children and aborted once. She showed no evidence of syphilis; all her labors were normal. After the last confinement she began to pass uterine casts at every third period. There was total absence of pain, the casts being discovered accidentally. Electricity was applied, and the curette was used; yet, just as in the cases where menstruation is painful, treatment did not alter the condition of the patient. She continues to pass clots. This case shows that pain is not an essential symptom of discharge of fibrinous membrane from the uterus, and that the phenomena in question does not necessarily entail sterility. —*Br. Med. Jour.*

THERAPEUTICS.

Treatment of Diphtheria.

Levy and Knopf (*Berl. klin. Woch.*) describe the treatment of this disease with papayotin (Gehe) and carbolic acid. They prepared the diphtheria poison after the method of Behring and Wernicke. When some papayotin was added to this diphtheria poison, and the mixture kept at 37° for two days, the virulence was much diminished. Thus papayotin has a weakening effect on the diphtheria poison. If papayotin were allowed to remain in contact with the living bacili without carbolic acid, the whole rapidity underwent putrefactive changes. In the treatment of cases the following preparation was used: Papayton, 10.0; ac. carbol. puriss. liquefact, 5.0; aq. destil. ad 100.0. The affected parts were gently painted every ten minutes for the first two hours, and then at intervals of every two hours afterwards, and this was continued during the night. There was rapid improvement in the local manifestations. The ice collar, abundant inhalations, and plenty of wine were used as usual. The cases of diphtheria when admitted are nearly always severe, the mild ones being kept at home. Encouraged by the good results, the authors sometimes delayed tracheotomy a little, and with satisfactory results. Of 51 cases thus treated 36 recovered, tracheotomy being performed once, and 15 died, of whom 5 were tracheotomized. Among the fatal cases there was 1 of genuine pneumonia, 1 of tuberculosis, 1 of repeated hemorrhage from the tracheotomy wound, and 3 of extensive broncho-puemonia. Among the recoveries there were 3 cases of nasal diphtheria, 13 of marked obstruction to the air passages, 2 of measles, and 1 of croupous pneumonia with naso-pharyngeal abscess. When compared with cases hitherto treated in the clinic (Strassburg), the mortality was diminished and the number of tracheotomies lessened. Naturally the authors do not look upon this local treatment as unfailing, but the good results obtained have led them to publish them.

Combined Effects of Morphine and Sulphonal.

Gonzales (*Arch. di Farmacol. e di Terap.*,) recognizing the good points in the action of this hypnotic, but realizing also that its effects in man are not quite so satisfactory as the results of experiments on animals would have led us to think, was led to try to reinforce its action by association with morphine, the main trouble with sulphonal being that the sleep is neither very deep nor very lasting. The subject was first investigated on frogs, with the following results. Sulphonal alone in the mean dose of 0.04 gramme causes no symptoms save abolition of voluntary movements for some hours. Morphine alone (0.008 grammes of hydrochlorate) produces marked excitement, lasting for about an hour, the animal then returning to normal. The two drugs given in combination in the same doses caused marked and lasting narcosis, lasting for many hours. On the heart *in situ* sulphonal alone causes a slight diminution in the frequency, but increases the strength of the systole, and the amplitude of the diastole. Morphine alone only reduces the frequency. The mixture of the two drugs is without action on the frequency, but increases the force of the systole and amplitude of the diastole. Similar results were obtained in the case of the isolated heart. The results on mammals were as follows: In rabbits (doses 40 centig.) and dogs (doses 75 centig.) sulphonal produces sleep generally in half an hour from the administration, the reflexes and respiration being unaltered, and the heart beats frequent and vigorous; but the sleep is not at all profound, and in dogs is sometimes wanting. Morphine produces it in rabbits about twenty-five minutes after the injection, but the animals soon shake it off; in dogs it lasts a still shorter time. The mixture of the two drugs is perfectly successful both in dogs and rabbits. The sleep appears physiological, and lasts from seven to ten hours, and is not in any way complicated by unpleasant sequelæ; the heart and respiration are unaffected. The author finally recommends this mixture of the two drugs as an admirable and safe hypnotic, free from cardiac depressant action, and efficient even in insomnia due to neuralgia and nervous excitement.

Intravenous Injections of Corrosive Sublimate in Cases of Cerebral Syphilis.

This mode of treatment was first introduced into use in Italy by Baccelli. Jemma (*Rif. Med.*, July 18th, 1893), recognizing the brilliant results obtained from its use by this observer, has administered sublimate in the same manner in four cases of cerebral syphilis. He regards it as particularly suitable in such a case, for it is very necessary to secure a prompt action of the drug, and impregnation of the system through the gastro-intestinal tract is too often a slow process. The drug is made up into a 1 : 1000 solution with distilled water, and a little salt and alcohol to aid solution. It is administered by injection into one of the superficial veins of the arm, generally the cephalic, using an ordinary hypodermic syringe, and taking care to sterilize both the skin and instruments. The operation is quite easy, and causes practically no pain.. The dose begins at 1 c.c., being increased to 2, 3, and 4 c.c., which last is the maximum employed. Its use in the author's four cases showed the method to be rapid in action, as well as safe, if performed with due care. The maximum effects are obtained with a minimum dose, and that without any pain such as accompanies hypodermic injections. The author has also employed the injections in other conditions, but beyond establishing the practibility of the method, his observations have not yet been sufficiently numerous to allow him to draw accurate conclusions. He promises shortly to give further details of these cases.

ARMY AND NAVY.

U. S. ARMY FROM SEPTEMBER 3, 1893, TO SEPTEMBER 9 1893.

Leave of absence for one month, is granted Major David L. Huntingdon, Surgeon U. S. Army.

Leave of absence for two months, to take effect from August 25, 1893, is granted Lieutenant Colonel Charles R. Greenleaf, Deputy Surgeon General, U. S. Army.

A board of officers to consist of Colonel Joseph C. Bailey, Assistant Surgeon General, Major Calvin DeWitt, Surgeon, and Major Henry M. Cronkhite, Surgeon, is appointed to meet at the call of the president thereof, at San Antonio, Texas, for the examination of such officers as may be ordered before it, with a view of determining their fitness for promotion.

Captain Henry S. Kilbourne, Assistant Surgeon, will report in person to Col. Joseph C. Bailey, Asst. Surg. General, president of the examining board, appointed to meet at San Antonio, Texas, for examination for promotion.

Captain Marcus E. Taylor, Assistant Surgeon, having been found by an Army retiring board, incapacitated for active service, is granted leave of absence, until further orders on account of disability.

Leave of absence for four (4) months, to take effect on or about October 25, 1893, is granted First Lieutenant Allen M. Smith, Assistant Surgeon U. S. Army.

Capt. Julian M. Cabell, Assistant Surgeon, is relieved from duty at Fort D. A. Russell, Wyoming, and ordered to Washington Barracks, D. C., for duty with the company of instruction of the Hospital Corps.

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ORIGINAL ARTICLES.

PSYCHICAL DISLOCATION AND THE THEORY OF MEDIUMISM.

JOHN E. PURDON, M. D., CULLMAN, ALA.

As a distinguished gathering of scientific men and women form all parts of the civilized world attended the Psychical Science Congress, held at Chicago, in August, under the Chairmanship of that distinguished member of our profession, Professor Elliott Coues, M. D., of Washington, D. C., who has done so much to uphold the honor of American scholarship by his versatility, thoroughness and originality, I would like to make some remarks upon a subject which occupied to some extent the attention of one of the sections of the Congress. I refer to the physiological and pathological conditions accompanying specter-seing, which in itself, has been a fertile source of dispute whenever the hard-headed disbeliever has tried to convince the believer in the reality of ghosts that their existence is all a matter of the imagination.

We know from the investigations of Galton that many persons are possessed of the power of visualizing, that is to say, of intensifying the act of memory by such a voluntary effort as objectifies in terms of form, color and perspective some past experience of the sense of sight. But any figure presenting itself to the minds eye under such conditions of natural or acquired power, which he found to be pretty common among those to whom he addressed his enquiries, does not come under the category of such subjective beings as those to which I refer.

The well known story of Nicolai, the bookseller who was haunted by spectres until he got himself bled, when they gradually faded away, losing their color and becoming indistinct in form and ultimately vanishing never to reappear, is reasonably accounted for by the old expression "pressure of blood on the brain," the optic centres being of course those chiefly disturbed, when they would express their disapproval most naturally in their own functional language.

I have, however, had experience of cases in which mere blood pressure or, on the other hand, anæmia of the brain centres, would not be sufficient to account for the phenomena, observed. In a former paper reference was made to a young woman, a medium for the manifestation of spiritual phenomena, who was attacked with severe nose bleeding during her extraordinary exhibitions and who quite lost the power of color discrimination for a time. As I was at that time, twenty years ago, a psychical researcher on physiological lines, I followed up the subject wherever I found cases that would afford information on the subjective side, and which would be analogous to that which I fully believe had been demonstrated to me on the objective side of existence. The girl in London, twenty years ago, had the power of projecting space realities from her nervous system as I know to be a fact; it was therefore advisable that I should try and find out as far as possible the *modus agendi*. We are now in the rational and enquiring age of spiritualism, having passed through that of negative dogmatism and *a priori* determination of possibilities; consequently a little rational gossip upon the subject of sense disturbance with a side bearing on spiritualism will not be out of place even in a purely professional journal.

In 1874, I had a patient in India who afforded me some interesting results. She had been a carpet sewer by trade before she married into the army, and the jar consequent upon her work, followed by a long railway journey to the station occupied by her husband's regiment, set up violent uterine hemorrhage, which continued to be profuse at each of her catamenial periods. She then suffered most violently from headache and at the same time the color vision was greatly disturbed on one side. Blue blindness was marked with her. I used sometimes to sit in the darkened room with her, to give her an opportunity to describe the faces she saw and the proceeding was to all intents such as I often indulged in under another name. But nothing other than subjective symptoms were ever observed.

About the same time I had under my care an older woman, who also suffered from irregularities of menstruation with violent headaches at her monthly periods, and also from achromatopsia of a periodic character. This woman was worried at times with figures standing before her mind's eye, but she, unlike the other woman, gave me good and satisfactory proof that she was a true ghost seer, if accurate description and identification of the photographs of a dead relation could count as proof. I merely mention this as a point to be remembered when considering the general argument with which I shall conclude this paper.

Both the women here mentioned, as well as the family of mediums mentioned in my paper of February 11th, when examined with black figures on a white ground, and *vice versa*, perceived the outlines of these figures, rings, bars, discs and segments of circles to have double outlines at definite parts, which behaved in a pretty definite way when the larger circular disc on which they were mounted was rotated. These gray double outlines for one direction of rotation would be carried round for a definite fraction of the circumference, when they would suddenly jump back to their original position, while, when rotation was made in the opposite direction, there would often be found a vertiginous confusion of vision to result. The subject was a puzzling one to investigate experimentally where one had only the word of an unstable subject to rely upon and where the results appeared to be so contradictory to ordinary experience. Strange and suggestive analogies to double refraction and complimentary color vision presented themselves, but the proximate solution appeared to me to be contained in the idea of irregular muscular strain on the one hand and color vision in correlation with the muscular sense on the other. In all the cases to which I refer the sensibility was quite stable on one side and perfectly normal, as checked by my own acute perceptions.

In one of my patients, a hypermetropic girl, I could give an opera glass into her hands at a time she had no perceptions of color on the affected side and by turning the screw so as to separate the lenses she saw all the colors in the order of their refrangibility. I was too cautious to let myself be deceived in any way; in all my complicated optical experiments I never found any attempt made to outwit me. In this case the reader will observe a strong analogy to those of the subjects of Binet and Fere and others, under the influence of hypnotism. In relation to the last experiment with the opera glass I may remark that its *naturalness*, strange as it may seem, is supported by the following fact. If you take a square marked into equal compartments, say a small chess board and fill in all the squares with patches of color so as to have an equal number of many colors in different patterns, it is quite easy to pick out any color, say a bright yellow or a red, and hold its pattern distinctly before the eye to the exclusion of all the rest which are just perceived as a confused mixture without any outlines. Another color may be picked up, when its pattern will jump out as before. The special effort of attention is here the analogue of the special optical arrangement which throws the image directly on the retina, when in spite of the inattention of the hysterical eye the visual centers are stimulated into conscious appreciation, the inference being that the action of the apparatus of accommodation is a normal factor in the psychical act of vision, though not a necessary one.

I had also studied cases of deranged vision in men who at the same time suffered from systemic disturbances that had an evident bearing upon the sensorial deficiency. Early at the year 1878, a soldier, Private D., whom I had under treatment in hospital on account of dysentery and liver derangement, informed me that he was troubled with visions of numbers of men who stood around his bed and appeared so real that he often got up to see if they were not actual living people. A short examination convinced me that he would present certain symptoms familiar to me as he showed the nervous temperament, intermittent heart, etc. This man's subsequent history of admissions to hospital justified the view I took of the hysterical nature of his nervous disturbances. He was frequently in hospital while stationed in Secunderabad in the Deccan, on account of dysenteric attacks of such a character as to confirm a suspicion I had that there exists a peculiar form of dysentery, or more properly hemorrhagic alvine flux, periodic in character which to a certain extent is analogous to menstruation.

When first I broached this idea to my senior officer in 1874, with reference to another soldier on the same station, the matter was regarded rather as a joke by him; but after the man had shown nearly a dozen admissions to hospital under the head of "dysentery," in little more than a year, a more serious attention to my view was demanded and the patient was sent to the hills, where he picked up wonderfully, increasing in weight and improving in appearance. Here too the intermittent heart was a very marked sign of the general tendency to neurotic disturbance; so marked indeed that the fainting fits to which he was subject were regarded as epileptic, before I took charge of the patient. In this case I could trace no abnormality of color vision in the slight examination which I made; but then, the weight of the disturbance of function being greatest in another direction, it is possible and likely that the volitional combinations, or perhaps I should say secondary automatic, were thereby saved. That a disturbance due to perverted directive activity, in which consciousness was primarily or secondarily engaged, was a factor in this case was evident from the fact that the very marked heart intermissions, sometimes occurring every three or four beats, were entirely absent during sleep; for I have felt the pulse beat calmly and regularly for three hundred strokes without an intermission during natural rest. I regarded the case as hystero-epileptoid, probably aggravated by bad habits. The inspecting medical officer looked on the man as insane.

To return to the case of Private D. A grand feature, identifying his peculiarity with those of the typical mediums whom I had examined, (I should also state that I have found periodic discharges of blood from the bowels to be present in a very well known and successful male medium whom I examined in London in 1872, and who also suffered from irregular action of the heart and insufficiency of ocular balance) was the onesidedness of his achromatopsia. For the other side the sensibility for the various colors was identical with my own as far as I could judge by comparisons with wools, glass and the plates in Benson's Principles of the Science of Color.

At first the confusion of color vision on the affected side was such that I could make no attempt to systematize the results obtained; for I found his statements as to the sensations produced by a given object vary from day to day. Remembering however that it was not a case of color blindness, in the accepted sense of the word, I was studying, but a something very different, a purely functional derangement in fact, as compared with an organic defect hereditary in character, I had to be content to take notes of what I found at the time, leaving the reduction to order of the results so obtained to a future investigation.

As my reference to disturbed color vision in this paper is general and illustrative of a theory or explanation of certain abnormal phenomena, I shall not do more here than say that D. showed analogous results to those already obtained, and that on the affected side he had a color system fixed for the time but variable with the state of his health, all his functions tending to return to the normal state together. I hope to make the notes of his case, which extended over some months, the subject of a future paper.

About the same time I had under my care, in the same regiment, a young soldier, Private R., who suffered from periodic congestion of the liver, a vaso-motor derangement analogous to that from which D. suffered. This man also showed color vision peculiarities, some of them very similar to those of D. He was subject to palpitation and pain in the heart when excited.

I have recently sent on to the Committee of the Psychical Science Congress, of the Advisory Council of which I have the honor of being a member, a set of pulse tracings about six hundred in number, for the purpose of illustrating some of my views of the physiology of mediumism and which show considerable variation in the form of the pulse tracings of the two sides of the body. These were not specially selected for that special purpose but to illustrate rapports or attractions between different persons, which they do perfectly even to the establishment of the fact that during such rapports the so-called "spirit raps" may be heard, as was frequently the case during my studies in a government hospital under my own control. These raps according to all the analogies offered by the phenomena of the better known and established branches of science, correspond to the breaking down of strenes or tensions, originating from the nervous system of a living being and not otherwise, at any rate as far as the expenditure of energy is concerned, however and wherever the directive force or order for the expenditure of that energy may have originated. This is physics and physiology and not transcendental spiritualism; so that whatever may be our predilections or beliefs regarding another state of existence, we cannot shut our eyes and ignore the facts belonging to this order of existence or flout their legitimate explanation, even if we have to look at things in general from a little wider platform than that on which we have been accustomed to stand.

Now the reader will easily see that I have been leading up to a theory of extra-muscular activity which will account for a great deal of apparent contradiction and violation of the order of nature. This solution I long ago recognized as the true one; it was suggested to me partly by the observation that there was a relative deficit of urea noticed in the urine of a well-known medium after certain "physical manifestations," while he lay in a "trance," and partly on general principles of physics and of common sense.

Twelve years ago I published such a theory in London, giving it as my opinion that the mediumistic diathesis was "histero-gouty" in its character; that is to say, that the nervous element was a prominent feature in it and that, at the same time, there were certain imperfect processes of tissue metamorphosis which had their own psychical significance. We would not expect to see the high class psychical or even physical manifestations in the case of a typically healthy plow-boy, who only transforms his food into normal work, as evidenced by good sleep, good digestion and good, if somewhat dull conscience, with the chemical evidence of the same. But this theory did not suit the red hot spiritualists who were all for "Spirit power" and who accused me of narrowness, arrogance and bad logic. They did not see that energy is one thing and that its direction is quite another thing. Energy is the power of doing work; force is a derived space function of the quantity of energy and involves the idea of direction. These thoughts the earlier spiritualists confused, even the best educated of them, but now-a-days they are more amenable to reason, for they publicly recognize the fact that a very large percentage of that which even the most advanced of them claim to correspond to what was formerly called miracles, does not go beyond the organism of the medium or involve any other spirit than his own. But how their efforts are brought about is still the mystery and the theory is yet to be accepted by them.

Starting from the humblest form of living matter the highest efforts of the developmental process is arrived at by modifications of the same original stuff, and the psychical side of life cannot at any point of the great chain be shown to have suddenly appeared where some faint trace of it did not exist before. So when muscle is special agent for the expression of animal energy we have in correlation with it the grown up and developed psyche which started merely in irritability or reaction to stimulation on the part of the original protoplasm. But what do we know of the nature of protoplasm or of worlds, outside of appearances and the chain of logic with which we connect them? Facts reign supreme and when new facts appear dogmatisms that set limits to their possibilities must give way.

It is necessary and sufficient for the explanation of the new facts to suppose that there is another mode of expression of the psyche, or animal soul, than through the agency of the muscular system. Surely it is not too much to ask for relatively as much as the original protoplasm had before the muscular system was thought of, it had a non-muscular mode of response to stimulation, which it felt too, within as well as without. It was the absence of development on the part of the psyche that made the growth through the ages so slow, but now that it has come to maturity, it is not confined to the muscular system alone. Let it kick over the traces and it will quickly learn to express itself in a new language and mode. If there is one lesson that the study of mediumism ought to have taught the physiologist it is that the organism has a spontaneous power of adaptation to even the most extreme conditions. The psychical science student knows that where single incoherent raps are at first heard, these steadily grow into a system of signals at the command of somebody's will; and where a few scrawls are at first made with difficulty, after a little tentative effort a learned treatise may quickly make its appearance from the pen of the unknown agent. And why? Because the psyche is quick to learn the use of a new instrument. Because it is ready and able to learn it, having already arrived at maturity! It was no wonder that the early spiritualists thought that in every instance a spirit *ab extra* took possession of the inanimate person of the medium and obliged him to act as impressed. It may be that such is probably the case in some rare instances, but that is not the question here. My business is to show my professional brethren that my experience with mediums and nervous sensitives justifies me in applying what I call the argument from perturbations to the establishment of the thesis that sensorial and motorial disturbance such as I describe, points to a loosening of the rigid physiological bonds which are found in the normal and typically vigorous organism. That loosening, I claim, is a stage on the way of switching aside the old organs and using the ether direct through its physiological or vital properties. What is there outlandish in such an assumption? I cannot see anything. It may be said that such an assumption involves the complementary hypothesis of an ethereal organism. Well what if it does? No one but the crudest and deadest materialist will any longer attempt to argue on the line that "the brain secretes thought or the liver secretes bile." It is too late to take up the argument of those who assert that the ego, the oneness of subjective life, is only a false appearance, powerless in operation and only the drift of the under current of the trillions of living elements that constitute the body, blood and bones of the organism. If we had no other argument to offer we might say that the ethereal body could have just as much a right to be composed of an innumerable army of molecules, as the earthly body with the ego for its King, its President or its Chief Executive, according to the temper and disposition of the little units themselves! But this is childish talk about a childish argument. It is the *oneness* of individual life that survives and that is equally represented in the earthly or any other body used by the psyche.

I have one concluding remark to make about muscle as an instrument for the expression of the spiritual activity of which each of us feels he is possessed, under whatever name we are pleased to call it. Muscle, like language, symbolic language, essentially artificial in its nature, is an instrument that preserves the individuality of its user. I believe there is a natural communal animal language that binds the individuals of the species among the lower animals together, and that it depends upon the use of extra muscular modes of force; muscle remaining the exclusive property of the individual for the preservation of its separate life. So in man, when the higher psyche resorts to the use of a lower mode of thought expression, with the loss of muscular expression it may lose the sense of its identity, for the time at any rate, though not of its unitary activity and masquerade under any name that may be presented from within or without.

If a very much slighter effort would enable the vital unity to make use of the ethereal element of expression, (as would be the case if the supposition made above of the existence of an organic natural language of the species be correct, as no doubt it is), the slight or subliminal effort would be far below that required for the performance of any accustomed work through the muscular system, which as a heat engine is a notorious waster of energy. But as the integrity of the functional activity of the muscular system is, without doubt, necessary for the perfect maintenance of the personality, we have in the very fact of the dissipation of energy the index of a conservative process that cannot be too roughly or suddenly interfered with.

Does not such a view as to the part played by the muscular system throw a vivid light not only on the contradictions of mediumism, but also upon the difficulties hitherto offered by hysteria and idiocy and even some forms of insanity?

I shall sum up my argument and appeal to common sense by giving some of the conclusions at which I had arrived before I brought this subject before the profession in the South, the medical men of Alabama, Georgia and Tennessee, who have always treated me with favor and consideration in my attempts to bring forward the results of my practical work and theoretical speculations.

The following paragraphs represent my views on the Dynamics of Mediumism.

1. That action at a distance, the prime problem of physics, may be regarded as an established reality in psychical science and in an analogous manner.

2. That, consequently, the muscular system must, in such an event, be supplemented by some other machinery for the transformation of energy.

3. That the muscular machinery of conscious thought is frequently dissociated from the actively functional organism, its inhibition permitting a free play to a finer mechanism, which it controls or overlays.

4. That such a conclusion directly leads to the adoption of the ether of the physicist, as the medium of communication between organisms which lie outside the normal physiological range of each other.

5. That the forms of intuition, space and time are replaced by the simpler quasi intuitional form *periodicity*, when an attempt is made to picture the subjective side of events in that mode of volitional activity less particularly specified than the muscular system.

6. That so for as the senses are concerned, the fact of periodicity is all-important, since without it the eye and ear cannot be understood as representing the unknown, under-lying reality of nature in any systematic way.

7. That, consequently, it is only the conscious relationship of the individual to the world that need be supposed to be interfered with when the individual is credited with powers which transcend our ordinary experience.

8. That the energy set free during the functional activity of the nervous system in its several parts, may be expended in producing disturbances directly on the ether, which disturbances of the ether, being so far only motions of matter, do not differ essentially from a muscular stress or a spoken word.

9. That the unanswered arguments of idealism, regarding matter as sums of sensations in fixed forms, applying equally to the ether as the postulated matter of scientific necessity, it is logically permissable to allow the subjective realitv (known in consciounness as the ego) in relation to the general store of energy and executive power, analogous to that maintained in consciousness under the forms of time and space and through the medium of muscle, matter and motion; provided the understanding can be statisfied that a more comprehensive form of quasi-intuition can be made available as a mode of systematized feeling.

10. That the true type of undisturbed motion being that of recurrence, it is more natural to attempt the construction of a working theory of the soul (tied down to matter as it is for its expression) by the contemplation of the ultimate small motions of matter rather than of those molar or massive motions of matter in the world around us into which the understanding and the judgment enter as much as the senses.

11. That as the fully manifested intelligence deals with generalities through the agency of thought and speech, so, on the other hand must the sub-conscious deal with *particulars*, except under special guidance, of which we can known little for certain, and so far can be legitimately represented in its final outcome as the operation of a sum of forces; for us at any rate it must return to consciousness for its interpretation as objective reality. Hence it can be seen how it is that mediumism may be the source of manifestations ranging from chaos (i. e. unsystematized particulars of feeling and motion) to the highest type of intellectual expression.

12. That the infinitely, or more properly indefinitely small or numorous, is not to be rejected as introducing an incomprehensible element into a theory which aims at unity, simplification and reconciliation, since we are constantly dealing with the same in all definite relations between our own bodies and external nature; being unaccustomed to such thoughts is no argument against their applicability. The mystery of mediumism is simply the mystery of matter in disguise and brought a little nearer to us through the introduction of the human organism as an instrument for its elucidation.

13. That the metaphysical thinker who accepts the fact of mediumism, even those which merely illustrate action at a distance, mechanical and mental, has no course open to him but to acknowledge the one substance theory in nature and to regard matter and form as the objective and subjective aspects of the spirit, which, however, can be only known in consciousness as the conditioned and relative.

14. That as no form can be regarded as final or absolute, so may matter present itself to the subject under aspects not immediately cognizable to the understanding, which has been developed along fixed lines common to the whole animal kingdom; the possibilities of human nature being demonstrated to overlap the penumbral borders of the unknown.

15. That the stability of the nervous system is the negátion of mediumism; a thoroughly sound organism being for the time at all events, a complete barrier between the state known as this world and any other one.

CLINICAL LECTURES.

PREPATELLAR BURSITIS; TUMOR OF THE THYROID; TORTICOLLIS AND DEFORMITY OF NECK DUE TO VERTEBRAL DISEASE; OSTEO-SARCOMA OF FEMUR.

ROSWELL PARK, A.M., M. D.*

This patient is thirty-five years old, a cook by occupation. He confesses to specific infection a good many years ago. Two month ago he was in the hospital on account of a sprained ankle and at that time he was put upon potassium iodide and directed to continue the treatment after leaving the hospital. It is evident that he reads the newspapers for he has been taking somebody's celery compound which is advertised to cure a variety of ailments. Two or three weeks ago quite an outbreak of boils or carbuncles occurred and he is rather inclined to consider this a violent manifestation of the efficacy of the said compound. Ten days ago, without any injury which he can remember, his left knee became painful and swollen, and this condition has become aggravated.

In making the diagnosis we must consider the location and the character of the lesion. The tenderness and swelling were found limited to the front of the knee. The joint cavity was not distended, for the patella could not be pushed downward against the condyles of the femur with a click, as is the case when it is floated away from its normal situation by a synovial effusion. Right in front of the patella there is a bursa, more or less distinctly developed in all persons, but especially large in those who are on their knees a good deal, as in women who scrub and men who polish floors and put down carpets. Clinically it is known that this bursa is a favorite site for a later manifestation of syphilis and such an involvement of other bursæ of the body is rare, only occurring from some unusual provocation. The typical syphilitic disease of the prepatellar bursa is a chronic inflammation with effusion, or the development of a gummatous tumor which may later break down into a chronic ulcer. Such developments, occuring without the history of traumatism and free from signs of active inflammation, may be ascribed to syphilis, and the diagnosis will be right in probably ninety-five per cent. of the cases. In this case we had something more to deal with. There were not only the location of the disease in the prepatellar bursa and the history of old syphilitic trouble without that of trauma to be considered; there were also present the signs of acute inflammation, redness, swelling, heat and tenderness. The diagnosis was, therefore chronic syphilitic bursitis with an implanted acute inflammation. The latter has been treated for two or three days by ice applications over cloths spread with mercurial ointment. In addition, the man has been taking potassium iodide.

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As you now see the knee it is an example of inflamed syphilitic gumma breaking down to form a carbuncular mass. The acute inflammation has subsided. The use of the word carbuncular leads to the inquiry what is the difference between a boil and a carbuncle? A boil is a small subcutaneous abscess in which the tissue liquifies and escapes readily by one opening. A carbuncle contains what the laity term a "core," that is a mass of gangrenous tissue which breaks down slowly and usually leads to the formation of a number of sinuses. The essential difference between suppuration and gangrene is here illustrated, the former being molecular death of tissue, the latter death in visible masses. I can squeeze out a little pus and a free incision will hasten the breaking down of the gummatous mass. The further treatment will be poulticing to stimulate cellular activity and to hasten the process of separation of dying by the activity of the living cells.

This is a case of considerable pathological interest. The patient, who is now fifty years old, was grappled by the throat when twelve years old, in the attempt to throttle him. The neck was injured and we are told that black and blue marks corresponding to the fingers were left for some time and there remained always a little enlargement of the neck. This increased very slowly in size till last May, when it took on a pretty rapid growth and since then it has attained the present dimensions which you see. About six weeks ago it became very tender in one or two spots and he went to a local physician who detected pus and evacuated it by two incisions. During the last two weeks he has developed difficulty in breathing and, in the last four days, difficulty in swallowing solid food and even liquids. The man is cachetic in general appearance. The prominent angle of the thyroid cartilage is shifted a little to the left of the middle line. On this side the ala of the thyroid is normal and the left lobe of the thyroid is apparently not enlarged. The larynx itself is somewhat movable underneath the tumor, showing that there is no intimate attachment between them. On the right side, the sterno-cleido-mastoid and vessels are pushed away to the rear. The mass extends downward to the clavicle and upward almost to the jaw. It is firm and hard, it does not fluctuate at any point now although there is no doubt but that it has contained pus. It involves the right lobe of the thyroid *body* —I do not like to call it a gland. You have noticed that in answering some questions, he speaks with difficulty and with a peculiar hoarse tone of voice. I will try him with a glass of water in order that you may see that swallowing is difficult. These symptoms may be brought about on account of a warping of the trachea and larynx by pressure, or the vocal changes on account of paralysis of the recurrent laryngeal nerve by pressure, or possibly both factors may operate. On the right side of the neck I find a series of beady enlargements in the line of the chain of cervical lymph-nodes.

How can we explain the history of this

case and bring it into harmony with the present findings? Imagine that the enlargement, which is said to have existed for years after the original injury without change, was due either to the organization of an exudate thrown out during an inflammation of the sheath of the thyroid or to the formation of extravasation cysts from blood poured out into the thyroid body itself. Or we may suppose that there was, prior to the injury, a small cystic goitre which was increased in size at the time so as to become noticeable. The rapid enlargement since May, taken in connection with the apparent cachexia, suggests a malignant growth, whether carcinoma or sarcoma I should not pretend to say. The size has been, at least in part, due to suppuration but, even if we exclude malignant trouble, the abscess must have developed in a cyst with very thick walls so as to constitute practically a solid tumor. We have so little goitre in this country that such cases as this are rare.

In Switzerland, the Tyrol and other parts of central Europe, involvement of the thyroid is comparatively common. It has been a difficult matter to account for suppuration in the thyroid when there has apparently been no external lesion. No complete and satisfactory explanation as to when pyogenic germs gain access to the thyroid has been given. The most generally accepted theory is that under certain conditions of the system, these bacteria penetrate from the alimentary canal, passing through the natural barrier of mucous membrane and escaping the lymphatic filters, find a favorable soil for growth in the thyroid.

I will pass a needle into the mass and see if I can withdraw fluid from it. The advisability of operation will hinge on the result. The aspirator chamber fills with a quantity of bloody pus. The indication is plain,—to relieve pressure on the larynx and trachea by evacuating this fluid, whether we decide to remove the entire mass or not. However, the operation is not a matter of emergency, the patient is not just now in favorable condition and I can not anæsthetize him as he has recently eaten breakfast. I will, therefore, send him back to the ward and postpone operation till he has a few days of tonic and preparatory treatment.

About ten days ago I brought into this clinic a little child of nine, whose head and neck were twisted to one side. Today the patient has returned for operation to relieve the torticollis. Very recently you saw a boy with a remarkable deformity of the neck due to disease of the vertebræ, not of the muscles. Since you saw him, he has lain most of the time in bed, with traction applied in the direction of the vertebral axis. You see how much brighter he looks and that the deformity is less than it was. I am now having a jury mast made for him, and in a few days he will be put into a plaster jacket and the jury mast substituted for traction in the horizontal direction. This will enable him to exercise and to enjoy himself in various ways.

The wry-neck of the little girl is an entirely different matter, consisting of a contraction of the sterno-cleido-mastoid muscle. Although some relief could be afforded by an apparatus to make a steady pull on the shortened muscle, the only rational treatment is tenotomy, on exactly the same principle as we would perform tenotomy of the tendo achillis or of any other muscle. Subcutaneous tenotomy was introduced by the erratic and rather peculiarly gifted surgeon Diefenbach, who showed not only what could be done by tenotomy but what perfect union could be expected in an hermetically sealed wound. Since his time, the use of tenotomy has been widely increased and, if we cannot reach a muscle by a small opening through the skin, we do not now hesitate to expose the muscle fully by a large wound, which is closed aseptically so as to make it as as nearly as possible like a subcutaneous wound.

So far as the causes of spasmodic and idiopathic torticollis are concerned, a great many theories have been advanced, and while only one theory can be correct in a given case, cases differ so widely that I am inclined to think that every explanation can be justified by certain cases. A very plausible explanation is injury to the sterno-cleido-mastoid during the process of parturition, especially when forceps have been used. Those of you who have seen forceps used, know the tremendous effort necessary at times in effecting delivery. The rocking motion which is so often practiced when the head, neck and body of the child are firmly wedged in the maternal pelvis, and which has been condemned by many obstetricians, is quite capable of inflicting serious injury on the tender muscles of the infant. A certain amount of blood is poured out, which becomes organized into fibrous tissue which tends to contract as the child grows, just as scar tissue in superficial locations does. Thus the head is gradually drawn over and, while at first very little force would be necessary to oppose the pull, if nothing is done till the child is several months or several years old, a tenotomy is necessary. Usually these cases are not brought to the surgeon's attention until children are old enough to go about and become conspicuous by reason of their deformity. Then the mother's pride is touched and she seeks relief.

In some cases the trapezius is affected as well as the sterno-cleido-mastoid, and such cases are thought to be due to irritation of the spinal accessory nerve. There are also other theories of nerve irritation which it is more difficult to accept. In the present instance, not knowing the early history, I cannot tell you exactly what was the cause of the torticollis. I expect, however, to relieve the trouble by a simple tenotomy. At the upper extremity, where there is only one semi-tendinous end of the sterno-cleido-mastoid, it would be somewhat easy to divide the muscle were it not so closely surrounded by important vessels and nerves. Below, however, it has two heads, one attached to the sternum and inner end of the collar bone, the other well out on the clavicle. In this neighborhood are the external jugular vein, some other superficial veins and, a little deeper, the subclavian and lower end of the internal jugular vein, but they are deep enough and far enough away from the muscle to allow a tenotome of proper shape to be slipped in so as to cut the muscle from the rear forward. The skin is pulled down over the clavicle for the first incision, so that when the tendon is cut the wound will be closed by the natural retraction of the skin. The same precautions are taken in the way of cleanliness and asepsis as for any operation, for we want the wound to heal by first intention.

Eighteen months ago, this man was hurt by falling against a rail which struck the front and lower aspect of the left knee at the level of the head of the tibia. His knee became swollen and he was confined to bed three weeks. He then went to work. About eight months ago he began to notice thickening through the lower portion of the left thigh. Comparing the two limbs, you will see a very great difference. Observe, however, that he walked in with very little limp. He has consulted me, not because he is lame but because he has a great deal of pain in the knee, especially at night, when it is sharp and jerky like tooth ache. Some pain is referred to the calf, some to the inner condyle of the femur.

Might this be a tumor albus, a tubercular swelling of the knee? I can scarcely think so, for there is no muscular spasm which is so marked a feature of tubercular osteitis and there is no synovial fluid collected. The swelling, too, is in the femur rather than at the joint. I cannot imagine a man affected with tubercular osteitis with so much enlargement and not suffering more incapacity. There is no particular sign of syphilis except a few nodules in the neck, which might occur in almost anyone, and the darting pains at night which are not typical nor diagnostic. The man denies all syphilitic taint. Is this a tumor in the true sense of the term? Is it an osteoma or one of the other tumors which may grow in connection with bone? This mass does not grow from the outside of the bone, it is either a solid boney growth or something that has grown inside the bone and has expanded it.

I show you here a specimen of disease of the lower end of the femur, in which the end of the bone is simply a hollow shell spread out to the size of a child's head. Whether we have to deal with such a condition or with a solid growth, I can not tell to-day. The patient is now taking large doses of potassium iodide and if these relieve his pain, I shall be inclined to think that his trouble has a specific origin of which he is actually or feignedly ignorant. If not, I shall make an exploratory incision in order to make the diagnosis and determine the treatment. The diagnosis lies, in my opinion, between a genuine osteoma, possibly an osteo-chondroma, or more probably a giant-celled sarcoma which is also called myeloid from its common location in the marrow of bone. I have seen many cases of syphilitic osteitis but never one producing so much enlargement. The swelling of the bone is abruptly limited and the shaft above is almost of its natural size. If this proves to be a myeloid sarcoma, which is essentially a malignant tumor, it will be disastrous to the limb and disastrous to life unless amputation is performed. Naturally the patient does not wish to sacrifice the leg unless it is absolutely necessary and I wish to give him the benefit of the doubt, and will, therefore, keep him upon anti-syphilitic treatment with the hope that it will relieve him, although I can scarcely express myself as sanguine in the matter.

(*Three weeks later.*)

Three weeks ago I showed you a patient with an enlargement of the lower end of the thigh which seemed to be of intraosseous origin but which, it was thought, might possibly prove to be syphilitic. At first he improved under large doses of potassium iodide and had less nocturnal pain. We imagined that the enlargement subsided somewhat and the circumference of the thigh certainly became less, but probably on account of muscular atrophy from disuse. Of late, his pain has become a more serious matter and is no longer controlled by potassium iodide, while he is sure that the enlargement has increased. He has been seen by several members of the staff and has been made to feel that whatever is done will be for his best interests. The operation which I shall undertake will consist first of a simple exploratory incision and exposure of the interior of the bone. If I can convince myself that anything short of amputation will eradicate the disease, I will adopt it, if not I shall amputate the thigh. Tubercular disease making such a swelling would necessitate pain and muscular spasm and would almost certainly be accompanied by tubercular foci in the other parts of the body, and a dyscrasia due to absorption of ptomaines, i. e., hectic. Even if the trouble were—what I think it is—sarcoma, but originating in the periosteum, there would be so much pressure on the veins that the superficial circulation would be overtaxed and we should see deep blue lines over the knee.

The Esmarch bandage is applied over an antiseptic dressing so as to prevent hemorrhage for, if it becomes necessary to amputate, we do not want to delay. You will notice that the rubber ligature is put on as a broad ribbon, not a narrow cord, in order to prevent cutting into the tissues. The leg is scrubbed with potassium permanganate solution, followed by a bleaching solution of oxalic acid and sodium hyposulphite. A curved incision is made over the inner side of the thigh and the tissues, as I cut through them, appear healthy down to the bone. On the outer side, however, I do not like the feeling of the tissues, so that I will dissect off only the skin. I have now dissected nearly half way up the thigh before reaching a point at which the bone is of normal size. The bone is now sawed through and the next step is to find and ligate the open vessels. The sciatic nerve is pulled down and cut off. Many arteries can be seen and although they are not bleeding I like to catch them with hæmostats and tie them before slackening the Esmarch ligature. There is so much cut muscle surface that I shall do what I do not unusually practice in making amputations, and that is drench the surface of the muscles with a hot antiseptic solution in order to close the mouths of the small veins and capillaries. Otherwise there would be a good deal of oozing. You will see the rationale of this method of hæmostasis explained by the whitening of the surface which means a coagulation of albuminoids. It is quite possible to overdo this method by using too high a degree of heat. The stump is brought together by buried cat-gut suture of the muscle layer and the usual skin suture, and covered by the ordinary antiseptic pad. I am sorry that the man has lost his leg, but the enlarged bones and apparent involvement of the soft parts on one side indicated the extension of a sarcomatous process, whose further advance could be checked only by removing the diseased part and adjacent tissues which were at least under suspicion.

(Section of the excised bone revealed a central osteo sarcoma, while the microscope demonstrated in it relatively numerous giant-cells. The patient recovered under one dressing.)

Local Anæsthesia may be readily produced in about a minute by a spray of menthol, p. j; chloroform, p. xv; and will last from two to six minutes.

COMMUNICATIONS.

BI CORNATE UTERUS; PLACENTA PREVIA; CÆSAREAN SECTION.

WILLIAM VARIAN, M. D.,* Titusville, Pa.

The following case appears to me to be of sufficient importance to be placed on record.

On Wednesday, August 30th, I was requested by Dr. George W. Barr, of this city, to see Mrs. C., swede; aged 22; primapara.

Labor had commenced at the termination of the full period of pregnancy, on Friday, August 25th, and had been continuous from the commencement. Pains had been regular and persistent, and, at times, forcible, during the entire five days. A slight bloody discharge had persisted from the onset of labor.

I found the patient exhibiting marked signs of exhaustion, with a quick, weak pulse and anxious expression of face. Labor pains regular but feeble. Os uteri well opened and dilatable. No obliteration of the neck. Fingers entered their full length, apparently. Explored the entire cavity of a non-pregnant uterus. No presentation or sign of a fœtus could be discovered by intra-uterine exploration. Vagina and uterus apparently of normal temperature. The abdomen was slightly swollen on the left side, and extremely tender, rendering palpation difficult.

Palpation demonstrated that the fœtus lay almost transversely across the pelvis, breech downward and to the right, head in left hypogastrium, vertex and back presenting towards the abdominal wall externally. No placental bruit or heart sound could be detected, although the patient claimed that fœtal movements had persisted up to 9:30 of the same night.

A full dose of chloral and opium was at once administered with a strong stimulant in order to secure a few hours of rest and restoration, and tide the patient over until daylight.

Section made at 10 A.M. Patient had rested well although sleeping but little. Countenance less anxious and pulse not so weak and quick.

Present and assisting at the operation, Drs. Geo. W. Barr, Wm. Johnstone and Wm. Nason.

Operation aseptic in all its details. The primary incision through the linea alba disclosed the lower border of the omentum closely adherent to the abdominal wall and to the uterus, dark-colored, apparently devitalized, and approaching a gangrenous condition. The incision was carried through the omentum and uterine walls, which latter were exceedingly thin, not exceeding three lines in thickness at the thinnest point. At this thin point discoloration had commenced with some softening, and rupture was evidently threatened.

The amniotic fluid was small in amount, of a dark color, grumous, but free from odor. The fœtus, a female of apparently eight months development, was macerated, ecchymosed and discolored; the cuticle peeling off where handled. The placenta was prævia, being spread over the septum which divided the uterus into two parts. A careful examination with a finger on either side of the septum showed that it was thick, firm and uniform, apparently of the full thickness of the uterine walls. It extended from the left uterine wall just within the internal neck of the uterus to the fundus near and to the left of the right cornu. The septum was apparently uninfluenced by the expansion of the uterus during pregnancy, and was thicker and firmer than the walls of the impregnated cornu. At this examination no opening was found in the septum, nor any point where an opening had apparently existed, so that the impregnated cornu presented the appearance of a hermetically sealed chamber. But later a thin and yielding point was found, through which a soft rubber drainage tube was carried.

The adherent and devitalized omentum was stripped from the uterus and abdomen and removed. The uterus was closed by silk sutures. The abdomen thoroughly washed out and drained was closed with silk worm gut. The usual aseptic dressing was applied.

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* Late Lieut. Col. and Surgeon U. S. Vol.; Ex-Pres. Med. Society State of Pa., etc.

Patient died from exhaustion on Friday Dec. 1st at 10.30 P. M., having survived the operation a few hours over three days.

This case affords the following points of special interest.

1st. The unusually firm and thick septum between the cornua.

2d. The implantation of the placenta upon this septum completely occluding the entrance into the left cornu.

3d. The development of the uterus to the left and almost transversely, — a necessary result of this condition of things.

4th. The thick septum, covered with placenta and with a breech presenting against it. Making a vaginal diagnosis of the real condition impossible.

A MEDICAL OBJECTION TO DANCING.

GEORGE L. BEARDSLEY, A. M., M. D., BIRMINGHAM, CONN.

Theseus, in "Midsummer Night's Dream," asks, "Is there no play to ease the anguish of a torturing hour?" His idea of mirth is akin to that of many who prate about "innocent amusements" to kill time or put an end to the megrims, either caring or thinking not for the *after-effects* of a revel. There is often a greater good done to a tired brain by a game than by medicine, but it is of vital concern to the person to be entertained that the sport has not too much rigour. Is dancing a jollity of this kind? This is the suggestion of the article now submitted. From a physical standpoint or on the issue of health it is susceptible of proof that the muscular fatigue and strain incident to this sort of fun is detrimental to the bodily vigor and endurance of woman.

Medical men, particularly specialists, meet often with patients who are nothing short of invalidism. They are walking valetudinarians who ought to be in a sanitarium and would be if they had the money. A large percentage of the feeble, nervous, chlorotic girls and women who frequent a doctor's office, are those who are obliged to eke out an existence with a body not put together to bear much of any burden, and yet because of a contracted purse must all day operate a treadle or measure calico or tend a carding machine or teach school. The public knows nearly nothing about the feeble energy of the majority of girls who work in our stores and factories for their bread and clothes, how small is their surplus of strength beyond what is necessary to the day's call on their nerves and muscles. The testimony of those who have particularly looked into the causes of woman's aches and invalidism, agrees with the saying of Pope that she is "fair by defect and delicately weak." Is it a marvel then that when such structures are taxed by the wearying gymnastics of a ball-room, their savings-bank of health early becomes insolvent? Graceful dancing is a no ordinary nor easy achievement; it requires more than a relish for light music or a lively company. There are few who are really artists in waltzing, and as in athletics muscle and agility are sine qua non, so to lead a cotillion or to step to schottische time involves a quick adaption of muscles that if weary or dull answer, too slowly for grace, the motions of a light-tripping partner. To dance with ease and becomingly every joint ought to be supple, every nerve fresh, every muscle limber, the entire body in a state of exaltation, not from excitement but physical buoyancy. And yet a great percentage of those who waltz or promenade at our public dances, engage in the pastime at the conclusion of a day's toil with not a moment of recuperation, and are not physically able to go through the steps.

A highly intelligent lady who is of delicate health and a close student, remarked to me recently that she danced because she needed the exercise. There was no gainsaying her need of recreation, but just how three hour's waltzing, and that is work emphatically, in a poorly-ventilated, crowded parlor could be a refreshing "exercise" is past my divining. It takes a robust, wiry, alert person to dance creditably, and my frail friend would be no more fit after such an "exercise" to ply her calling the next day, than would a watcher be for a night's round in a sick room who had lost her sleep for a week. The girl who is compelled to labor all and every day for her board-money has gone through all the strain her machinery can stand and generally more. It is time when night comes to halt and give the engine a rest for the next day's action. A dance till midnight for the store-clerk, shop-girl, school teacher or dress-maker, is like forcing a trotter after he has barely won one heat to secure a second. The horse gets distanced and breaks down simply because he has been driven beyond his limit.

If dancing is too expensive a sport for those who earn their bread by the sweat of their brow and have no strength to spare, are the same objections tenable in the case of the wealthy society lady who has a retinue of servants, does no manual labor, has no responsibility to vex her and can sleep the entire day after a night of gaiety. If it only required massage, baths, nicely-prepared repasts and comfortable beds to insure a complete recovery from the enervating or depressing effects of hours of waltzing, those who belong to the Four Hundred ought to show no marks of dissipation. It does not follow, however, that because of so favorable surroundings those who lead the fashionable levees and are distinguished at every cotillion are not affected, their health not compromised, by excesses or irregular hours. The experience of physicians is that insomnia, neurasthenia, dyspepsia, hypochondriasis, nervous and organic infirmities generally, are very common among society women. It is a statistical truth that the "rest-cure" institutions and sanitaria thrive on material furnished from this class. These of le beau monde play out earlier than one would imagine; experience reactions in consequence of a life artificial and exciting in the extreme, that are highly exhausting, and keep up on the stimulus of the will until some piece of their machinery snaps under the high tension and they don the habiliments of a chronic cripple. Those of the peerage are by no means exempt from the ills the populace suffer, and if one, sitting in the lap of luxury, on whom even summer winds do not roughly blow, hasn't a constitution that can brook the wear and tear of ball-room feats, what is to be said of the over-worked and under-fed, the heirs of toil, who are bound to follow the folly of their high-born sisters? The question that concerns the mother and daughter is does it pay to indulge in a sport just to be in the fashion, or to drive the blues or dull care away, when nature protests against it? That it doesn't, is evidenced by the fair-sized list of ailing maidens, and mothers out of sorts, that are now a day acquaintances.

MENTAL DISORDERS.*

JOHN CURWEN, M. D., WARREN, PA.

To the physician who engages in the study and treatment of mental disorders, the problem is presented of a condition caused by two forces acting reciprocally on each other. The bodily condition influences the mental, and the mental state acts on the body in different degrees and in varying force, at given periods; and the careful study of these actions and reactions is requisite to avoid mistakes, or errors, and to arrange in the most satisfactory manner the course of treatment to be carried out.

The tendency of the present period seems to be to give almost exclusive attention to the treatment of the varying bodily conditions, but it is a fact which the most cursory observation will confirm, that certain mental states will either add to or retard the progress of the mental disorder, depending on the intensity of action of the particular class of manifestations which may act on the individual, at any given period. These actions may be of a very direct and positive character, giving evidence of their influence in the plainest manner, or they may be indirect and insidious, requiring careful discrimination to discover their presence and mode of action.

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* Read before the Penna. State Medical Society.

To attain a clearer understanding of the proper treatment of mental disorders, it is proposed in this discussion to consider first the bodily conditions which require special medical direction, and then the influence of the emotions, passions and affections, as they may exert a determining direction, for good or evil, in any given case.

Without attempting any special designation of the varying forms under which mental disorders may be ranged, it is sufficient for the object in view to divide the whole into two general conditions, the states of exaltation and those of depression.

It must be distinctly borne in mind that the modes of life, the social habits and customs of the community, the attention to hygienic rules, and a variety of subjects which may be classed under the general head of peculiarities of physical actions, which cannot be accurately defined, though readily recognized in individual types, have a more or less determining influence in the production of disordered bodily conditions, which lead on gradually to irregular action of the nervous system.

The principle which must govern in the treatment of all mental disorders is that laid down, so clearly and distinctly, by Prof. H. C. Wood, "that individuals must be treated and not cases." The intense individuality of the majority of people requires that their peculiar condition be taken into careful account in all efforts to formulate a course of treatment. The idiosyncracies in regard to certain classes of medicines, the peculiar and often unexpected effects produced in many persons by the administration of ordinary doses of medicine, and the irregular action of certain organs caused by disordered nervous conditions, require special care in the prescription of such medicines as would ordinarily seem to be indicated for the condition present. These deviations from the ordinary type can only be ascertained by careful experiment and observation, but they are frequently of such a character as to determine the issue in any given case, and excite alarm and distrust in the mind of the patient, alive to every unusual and unlooked for result.

In all cases of great excitement it is very important to consider carefully in what manner that excitement may be most readily controlled and subdued. If such excitement occurs in a stout, robust man, the primary indication is a free purgation, and the best medicines for that purpose are calomel and Dover's powder at night, followed by some active cathartic in the morning. The special effect of the calomel and Dover's powder seems to be in the peculiar action on the different internal organs and on the skin, giving a peculiar derivative action from the brain.

What sedative should be employed after the free action of these medicines must be decided by the peculiar susceptibility of the patient to the influence of sedatives. Opium, as a rule, will best be dispensed with, from its tendency to interfere with the secretions of various organs and its special action on the nervous system and the brain. The best sedative is a tonic, preferably the pyro-phosphate of iron (5 grain doses), with a small portion of compound tincture of gentain, regularly three times a day, with good food in such quantities as to support the system and provide a full supply for the waste caused by the unusual excitement. An occasional narcotic may be required, to moderate the excitement and cause sleep, and some of the most recent preparations as amylene hydrate, paraldehyde, etc., may be used for this purpose.

It has been, and still is the habit with many physicians, to use, chloral and bromide of soda, or bromide of potassium, freely, in full doses; but it has been found that this combination, continued for some time, produces often the very effect, in certain individuals, it was designed to relieve, a peculiar form of mild excitement with great confusion of mind, loss of appetite and great nervous depression, which can only be relieved and removed by the withdrawal of the medicines, entirely, and the substitution of some tonic and an ample supply of nourishing food, adapted to the special condition of the individual beginning with egg and milk and any other food which the stomach will bear. It must at first be used in small amounts, frequently repeated, and the intervals lengthened and the quantity increased as the strength of the patient improves.

In certain conditions of high excitement with violent demonstrations, the individual will be better if he can be placed in a room, with some one to watch him, and kept free from all intercourse with others. When of a milder type, regular exercise in the open air, to a moderate extent, will be of great benefit.

There are, however, certain forms of excitement of high character, in feeble persons, where the mental powers are specially disordered, with great confusion and incoherence, where no sedative or narcotic has any favorable effect, and quiet and composure can only be secured by the use of pure rye whiskey, in half ounce or one ounce doses, three or four times a day.

In such cases the whiskey, to that amount, is a pure sedative with a tonic influence, and need only be continued until the excitement subsides and then be withdrawn, as the tonic and food given will be sufficient to keep up the strength.

An opinion prevails, generally, that it is not prudent to withdraw any sedative or narcotic which has been taken in large quantities by an individual, or where the person has been using liquor freely, for fear of unpleasant effects, but the withdrawal should be gradual. After many years' experience with all this class of patients, I am prepared to say that no bad effect will result if the narcotic or the liquor be withdrawn at once and a good tonic, with such food as the stomach can retain and assimilate, be substituted and used freely until the depression following the withdrawal passes away.

Cases have come under my care where great injury has been done by the administration, in mild cases of an asthenic type, of large quantities of whiskey to the extent of a pint, or even a quart, in twenty-four hours, and continued for several days. No system can properly dispose of such an amount without injury to some of the organs by which its elimination may be expected, and the consequent effect is on the brain, giving rise to an unhealthy action and a very uncomfortable feeling of lightness or stricture. In addition, the proper function of the stomach is interfered with, so that the appetite is diminished and the food taken is not properly assimilated.

It is more than doubtful if any case of nervous depression is ever benefited by large doses of whiskey, but rather by a course of careful feeding, moderate exercise and mild tonics.

With no disposition to deliver a lecture on temperance I may yet be permitted to say that very great care should be exercised in the administration of stimulants.

Where their effect is felt by the fullness of the head and a flushing of the face they are not of any service, but when they can be administered in moderate amount and no such effects but rather an increased action of the stomach and a feeling of relief from fatigue or lassitude are experienced, they are beneficial, and give tone and strength. This effect can generally be best secured by the administration of half an ounce, or in extreme cases of depression, of an ounce, three times a day, and continued for a number of days, but not after the system has rallied from the depressed state.

The individual is often impatient at the slow progress, but patient waiting is no loss, and to that patient waiting the individual must yield to be sure of gaining that which he really needs; a relief from a depressing and disheartening condition.

It is a fact impressed more and more by daily observation on the minds of the profession, that the large majority of cases of mental disorder at this time are of an asthenic character, and need tonic medicines and good diet from the commencement of the treatment.

A variety of proprietary preparations are in the market, recommended as tonics from the formula from which they are reported to be made up. The amount of tonic effect from either of the medicines in these preparations is so small as to be of little real benefit. What is needed is some of the preparations of the U. S. Pharmacopœia, which are well known in constitution and composition and can be used in such doses as to have full and beneficial effect as soon as the system comes fully under their influence. It is an injustice to the patient to have him use bottle after bottle of some proprietary medicine, looking for a good result, when a better and a speedier benefit can be obtained from the use of some of the medicines from the Pharmacopœia, the exact constitution of which is fully known, and the dose of which can be readily adapted to the requirements of the individual.

When cases of depressed mental disorder are met, the condition requires a different course from those of an excited character. The depression is caused, in the great majority of cases, by some disorder of the general system lowering the nervous tone and action, and must be met by a course of treatment calculated to bring up the whole system to a higher level and a more healthy condition.

The great trouble in these cases is the inability to sleep to the extent required to repair the loss occasioned by the daily worry and restlessness, but a course of narcotic or sedative medicines, steadily continued, does more harm than good by inducing a condition very likely to interfere with the process of digestion and proper assimilation which it is imperative to retain in the most efficient action.

An occasional sedative to break up the unhealthy restlessness, graduated exercise below the point of actual fatigue, cheerful diversion and moderate occupation, good and nourishing food regularly taken will relieve these conditions better than any means that can be used.

Great care will be required in the selection and administration of the food in the earlier stages of the different forms of mental disorder. In the excited condition patients will not eat on account of the peculiar excitement and the delusions which control them, and unless special attention is given to their regular supply of food and their eating it, they will suffer when the period of depression comes on, and they may not be able to rally from the great depression.

In cases of melancholy a very great reluctance is often manifested to the regular eating of what may be necessary to support the strength through the more acute stages of all forms of mental disorder by as great a variety of nutritious food, and in such quantity as the stomach will bear, so as to avoid the troubles likely to arise at a later period. Milk, milk and egg, eggs, beef, chicken, mutton and lamb, with a variety of vegetables and good bread may be given as the system will bear, but filling the stomach with soup and such matters, which contain very little nourishment compared with the amount of liquid taken, does not give the patient the character and quantity of nourishment which he really needs.

Where great sluggishness of the circulation is found, regular massage and, where can be had, Turkish baths, will be of great service in assisting the action of the other means employed.

As a consequence of these morbid conditions, the mind will be strengthened and improved by the action of one class and injured and disordered by the indulgence in the other, and it is a familiar fact that many cases of mental disorder arise from the effect produced by the constant action of one or more of the emotions or passions leading to an exaggerated or perverted view of certain relations of the individual to others.

If these emotions, passions and affections are thus instrumental by their action in the production of mental disorders, it must be taken as a necessary deduction that they will exert a greater or lesser influence on the mind when it has become disordered. The clear inference is that every effort should be made to divert the mind from what may, by the plainest reasoning, have an unpleasant or injurious tendency to something of a different character, and thus, by the implantation of brighter and more healthy thoughts and feelings, drive out those which are doing steady injury to the mind. Every form of diversion and occupation should be employed to change the current of thought and feeling. This effort will be where the thoughts are all of an unpleasant, depressing character, and where faith and hope need to be steadily held before the mind of the individual, faith in the employment and steady application of the proper means to change the morbid to a healthy condition, and hope that the varied means thus used will in due time result in a return to a healthy action of the bodily functions and a natural condition of the mental powers.

The effect of trivial incidents in changing the current of thought and feeling should be made use of in the employment of every means that can be procured or devised to induce a brighter, healthier and more cheerful direction of each and every beneficent emotion and affection.

Acting, therefore, on the principle that an evil in any form can only be eradicated by the persistent effort to implant a good, the evil effects and influence of the maleficent passions and emotions, such as envy, jealousy, malice, hatred and all uncharitableness can only be replaced by the steady inculcation of faith, hope, love, joy, gentleness patience and temperance in words and works, no effort should be spared and no labor should be considered too great to be employed to bring about such beneficent results.

SHOULDER PRESENTATION IN PRIMIPARA WITH CASE*

JAMES C. PEARSON, M. D., MITCHELL, INDIANA.

On the 13th of November last, I was called in great haste to see Miss E. When I arrived I found two physicians in attendance. On examination the head of the child resting in the left sacral iliac junction with the right arm and hand prolapsed at the vulva. Impaction strong; the mother badly prostrated and weak. She had been in labor about 20 hours, under care and guidance of a midwife. Her physicians had been unable to return the arm or turn the child, deliver and relieve the woman. The child was dead. The womb had long since been drained of its waters and contracted closely about the body of the child, which rendered it impracticable to return the arm, bring down the feet and deliver the child without great danger of uterine laceration or fatal contusion of the parts of the mother, and of failure to succeed in effecting the version. A fourth physician came to our assistance. The woman was so weak and prostrated that we decided that the only mode of procedure left us was to amputate the arm, eviscerate the chest and abdomen, then deliver. After the surgical operation of amputating the arm, eviscerating the chest and abdomen of the child, the two practitioners first in charge of the case returned to their homes to get other instruments. The woman's strength had failed to an alarming extent, and it began to look like she certainly would die without relief, for we had done everything to sustain her strength in the way of giving her spirits vini gallici. We then gave her fluid extract of ergot in teaspoonful doses every 30 minutes, and after taking the third dose her pains grew stronger, at which time another practitioner came to our assistance, and by the use of the blunt hook we delivered her of the remains of a male child. The mother, after protracted cardiac trouble, made a fair recovery.

SOCIETY REPORTS.

WESTERN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Annual Meeting, Kansas City, Missouri, December 27th, 1892.

[OFFICIAL REPORT.]

The following is the discussion on Dr. Adams' paper, published in THE REPORTER, May 6, 1893:

DISCUSSION OF ADAMS' PAPER.

DR. JOSEPH PRICE: This is a huge subject for a discussion. The author has given us a brief and interesting paper and his conclusions conflict only slightly with mine. I think he covers too much territory in his treatment, but we will not quarrel over that feature of his paper.

In regard to the natural history and pathology I differ with him some. I believe that the pathology of these tumors has changed in the last twenty years. The numbers given in the total surprise me in the matter of color. In Philadelphia, I find more whites suffering from hard growths than blacks, and we have a huge colored population there. Mr. Tait calls attention to the non-existence of these growths in the black; that they are not known in Africa. During his student days patients with a hard growth were considered curiosities. Edinburgh physicians and surgeons tell me that they are on the increase. This corresponds with my own experience. I find that they are on the increase in the south and south-west. Dr. McMurtry told me that his country is simply full of large hard growths; that they are very common to what they were ten years ago. I have for a long time classified them as rapid growing myomas, the œdematous form of the myoma the most rapidly growing of all. The multi-nodular fibroids I am not willing to class as myo-fibromata; they are slow in growth, the myomas are rapid—some of them quite as rapid in growth as cystomata.

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* Read before the Mitchell District Medical Society, July 13, 1893, at West Baden Springs, Ind.

The author has called attention to two important symptoms in the growth of these tumors. The symptoms of pressure have been very marked, particularly in the history of the three cases given in full. In myoma, pure and simple, the pressure symptoms are not so marked. The tumor is symmetrical rather than œdematous, and sometimes disputive in diagnosis. This is also true in cystiform degenerations and large myomas. Myomas never undergo cystiform degeneration, at least in my experience. I will here allude to the average age of this group of sixteen—37 years, giving these patients a period of eight, nine or ten years for growth and for a continuance of these pressure symptoms and for retrograde changes so common and incident to the growth of hard tumors. In the first case we have some subsidance or diminution in size of the tumor. The Doctor doesn't give his reason for the removal of this tumor. In the second, the changes are scarcely perceptible. If my memory serves me right, the tumor remains a large, multinodular fibroid with marked pressure symptoms. In the third I have forgotten just what took place, but I will go back to what takes place in these tumors and I will use these drawings.

There has been a great deal said in the literature about these growths occurring in colored people. (You remember the old books in surgery say—femoral hernia in women and inguinal hernia in men. Some time ago I asked Mr. Gemrig how often this occurred in his experience, and he assured me that femoral hernia in women was quite rare. My experience in hernia doesn't agree with the old books on surgery. I have found inguinal hernia, single and double, quite common in women as well as in men. It is very curious how one book copies after another.) This drawing is simply a typical case of multinodular fibroid. All of these small tumors are fibromata, white and cut off almost like an onion—a huge number of small ones, some forty or fifty, studded this uterus. This tumor continued to grow almost imperceptibly for some nine or ten years, when the patient conceived and bore a child by a new method. I scarcely think that any form of therapeutic treatment—clay or mud or ergot or iodine or muriate of ammonia—would avail much in the treatment of cases of this character. You will find in this case that three tumors are pediculated—simply little pedicles well nourished. Just here I might allude to a huge group of cases treated in Philadelphia, by muriate of ammonia and ergot, pushed and crowded for years until the health of many patients was impaired, and many of them have submitted to section. You will remember Atlee and Drysdale persevered in the ergot treatment for many years, and wrote treatises on the subject, but they say nothing about it now.

This tumor (illustrating) is pure fibroid; a pediculated fibroid filling up the pelvic basin. The uterus was a perfectly clean one, not a semblance of another growth in the uterine wall. That was altogether exceptional. This was also a pregnancy terminated by the Porro-operation.

Now we come to an interesting variety (illustrating with drawings)—and they are not rare—of a fibroid early in its growth. Years ago it was classified as intrauterine, and many enucleations attempted and many women sacrificed. Here you have some of them expelled on the peritoneal side and one in the cavity of the uterus. The latter, well nourished, grows to a considerable size; the others scarcely grow to be perceptible. This woman was under observation for some time. At times there seemed to be diminution in size simply from a saline treatment together with some simple tonic. She lived at the wash tub. Finally the symptoms of pressure on the bladder become so marked that she decided to have it removed. I had no thought of this huge tumor. I looked upon this portion as being myomatous because it was rather soft. Below I could feel these smaller fibroid tumors but when I incised the uterine wall this thing protruded and was unquestionably undergoing sarcomatous change. I will return to this drawing in referring to the outcome of these cases. They are for all the world like this (illustrating.) This was a huge tumor with ovarian and tubal disease, abcesses on both sides complicating each tumor. To my great surprise when I incised the uterine cavity I found inside something for all the world looking like roast beef and undergoing sarcomatous changes. Specimens were taken from both of these and pathologists assure me that they are sarcomatous.

This drawing is one of cystiform degeneration taking place late in the development of this tumor. Early in the history of the growth of the cyst there is very little inconvenience, imperceptible in locomotion, and vesical symptoms are not noticeable. But later, at the age of forty-seven or fifty, it grew rapidly and the pressure symptoms became very marked. This rapid increase in size was unquestionably due to the cystiform degeneration.

I have watched with care the treatment of these tumors for some years, and I have had opportunities to study and watch cases under about every known treatment. We have in Philadelphia, two or three enthusiastic electricians. Their cases are under observation and have been for some years. A large number of them have had hysterectomies performed. They are all well or dead. Some of them died while under treatment at the hands of the electricians. Deaths are about as numerous in the hands of the electrician as in the hands of the surgeon. Now we often hear some good old family physician, with a large and varied experience—and he has a right to talk—tell us in county or state or national society meetings, that in an experience of thirty years he has had say four cases of fibroids; he will mention some kind of treatment he tried for a couple of years and the patient got along fairly well, and concludes that operation isn't necessary. Now, sir, at the present time, we treat that gentleman very much as a shrewd lawyer would treat a witness on the witness stand. We handle that physician the same way as to appendicitis. We want to know something about the patient at the present time, where she lives, what she is doing and how she is getting along. It is all very nice to say that you saw that woman two years ago and have not seen her since and don't know anything about it. In the second case the Doctor tells us that she is now in bed and ill; he is very nice and truthful about the matter. The other physician tells him that it is apoplexy, but he tells us that it is a tumor that has downed her. A patient of mine was treated from time to time, by two excellent physicians in Maryland and reported as cured. Two years ago she removed from Maryland to New Jersey and got suddenly and acutely ill, when I saw her. They are all still reporting that case as a cure, and I am showing it over here in Kansas as a cure with water-colors. We expect every man to tell us all about his case, to give an account of her at the present time; to say nothing about one or two or three or four years ago, but to tell us where she is and how she is getting along.

For instance, to fortify my point, a man living at Chestnut Hill was treated for twenty-four attacks of appendicitis by twelve doctors. He was wealthy and could afford to travel between Jacksonville and Los Angelos. He was reported by a number of doctors as having been cured. In the twenty-fifth attack he was ill and dying and Dr. Agnew removed the appendix. He had a nice recovery, while Dr. Agnew has the specimen in a bottle. In the next case a man in Philadelphia had twelve attacks of appendicits and he had a fairly good recovery but never was able to go back to his business. I saw him in consultation in the thirteenth attack. His wife gave me the names of six or eight doctors that had treated him, and told me all about the treatment. Her husband was in collapse and I told the physician that he would be dead in an hour or so. They had him propped up on five pillows. I told the physician that operative interference would simply mean a dead man; that he would never come off the table alive. He asked me to tell the family, and I told the wife that her husband was very ill. She smiled at me and said "I have seen him as ill as that twelve times." I could not tell her that her husband was dying. I said good-bye to the doctor, asked him to have a *post* and he telegraphed me that the man was dead three hours after my visit, that the *post* would be the next afternoon at 5 o'clock. Now those six or eight doctors are continuing to report that case as cured.

In a recent case, six or eight months ago, my brother went to New Jersey to operate for appendicitis, and the doctor and consultant and family wouldn't hear to any operative interference. They wouldn't have their boy touched with a knife, and he returned. A few days ago they telegraphed him to come again, and the doctor met him on the platform of the station and said, "Doctor, I am sorry; the boy is dead." Well, we know from prolonged study, observation and careful watching of these cases, something about the natural history of such murderous troubles. Now I am not criticising the paper, but it is just a little too broad and too generous. This is the only criticism I have to make. The author has operated and he has advocated operative interference, but I fear he has counseled a little too much delay, favoring renal symptoms and retrograde changes in the surrounding viscera—changes which are bound to follow delay in the removal of these tumors.

Concerning the early treatment of fibroids. There is a good deal of criticism these last few years, of Mr. Tait's operation for the removal of the appendages. I believe it was Hegar's treatment to establish premature menopause in favor of shrinkage and diminution in the size of tumors. I consider it one of the best operations in surgery. I scarcely know an operation that accomplishes so much. Surely trephining for epilepsy and brain troubles has not accomplished half so much. Hegar's operation is here to stay; it is a very valuable operation if done early in the growth of small fibroids. I am talking about fibroids, not myomata. It is worthless in myomatous growths and in rapidly growing œdematous fibroids, but in pure fibroids it is the treatment par-excellence if done early. The operation is simple; it is quick and it is safe. No patient should die from a removal of the appendages when done early for small fibroids; and if thoroughly done, if the tubes are removed to their very roots without leaving either tubal or ovarian stroma, the menstrual flow will cease and the tumor diminish in size. I have seen them diminish one-half from the metrostaxis that follows the section alone. I like to see it; it is curious that in small fibroids after the removal of the appendages, we have twice the flow that we do in pus sections or double ovariotomies or like troubles. I have said sufficient about this particular procedure; I value it.

Many accidents occur in the growth of large fibroids. For instance, an otherwise healthy woman carries a tumor for ten years; she marries and conceives. Large numbers of healthy women with uterine fibroids do conceive. And some few of them perish undelivered and without assistance. All are not near an educational centre or a good surgeon. It is simply surprising the number of women that perish with fibroids and deformed pelves. For instance, only a few miles from Philadelphia, right in the midst of surgeons and specialists, they, with a pelvis one inch in diameter, die in the poorhouse. One day about three years ago, while out on the West Chester road, I spied a dwarf; she was six or seven months pregnant—a little dwarf with some form of kyphosis. I said to a friend who was with me, "There is a case for hysterectomy or "Porro," and I asked whose patient she was. They gave me the name of a physician. I did something I never would do again, I let the matter drop without trying to save her, because I thought they would hunt her up and see that she was cared for. But she went to a poor house within twelve or thirteen miles of Philadelphia and died undelivered. And so it is in many cases.

This woman (illustration) was dying, so I did this operation. The fœtus was away under the diaphragm; I couldn't have reached the internal os with a sound twelve inches long; nor could she have passed the product of conception had she aborted at the second or third month. So completely had the pelvis filled, it was difficult, requiring some amount of superpubic compression, to permit the passage of the catheter.

Now I do not mean to show any levity about these operations; they are difficult, trying and dangerous. Hysterectomy is one of the biggest hills in surgery to climb; I am not particularly fond of it. While you may think I am an enthusiast in abdominal surgery, I am not. I am getting ready to stop; I have had enough of it. But from a large experience and a long one, having dealt with a great variety of complications and in a great many patients, I feel it my duty to stand my ground and to preach hysterectomy—to preach removal of the appendages early—the removal of a healthy fibroid before it does mischief by pressure, before it cripples the kidneys and before visceral lesions take place from pressure,—the removal of a healthy tumor from a healthy peritoneal cavity is one of the safest operations in surgery. The removal of a healthy tumor or one with a fixed pedicle, small—and it should always be made small—and the peritoneum hermetically sealed is one of the safest and surest operations in surgery. The patients should all get well. It is difficult to have perfection in all your work, I will admit. But if you can do it with perfection, all will get well, providing the kidneys are sound and no retrograde changes have taken place in the viscera.

In my first eight cases, all neglected—all in bed and dying, all ready to surrender life—the women said, "we have tried everything and now, doctor, I am willing to submit to an operation." Unpromising, some of them perfectly hopeless. Of the first eight I lost two, both malignant and both hopeless. In the first I had a sarcomatous sigmoid, unquestionably due to irritation and pressure; and in the second I had a sarcomatous cæcum extending up towards the kidney. Both absolutely hopeless; no possibility for a recovery and too late for bowel resection or anastomosis. I went in and I had to come out; I commenced and I had to finish. One of them lived four days and the other six.

A great many operations are simply attempted; men open the abdomen and get tired and stop; don't go on. That is simply cowardly. No man has a right to attempt the removal of one of these growths until he learns how, until some one teaches him how. It is of vital importance that he witness a few such operations, or serve an apprenticeship under some operator until he learns how to make a pedicle, and how to manage it. He had better keep his hands off if he hasn't learned how, or he will lose a large number of lives; but when he does learn how, he is ready for work.

Dr. Cordier: There were a few points left out in the discussion of uterine fibroids for all that Dr. Price, as well as Dr. Adams, covered the ground pretty thoroughly. I think the removal of the appendages, as we understand the pathology of uterine fibroids more thoroughly is going to be more limited in its application. This is due, I think, in the main to this: that as we understand the pathology better, we are learning the difference between fibroids and sarcomas. Many cases have been operated upon and the appendages removed for so-called fibroids, which have proved to be sarcomatous growths. The removal of the appendages for sarcoma does not stop these growths. There is another variety of growth occurring at the menopause; it may occur at any period in a woman's existence; it may occur in early girlhood. The President and myself assisted in an operation on a patient last spring, for the removal of a large fibroid of the œdematous variety. She was thirty-one years old. I have seen this variety in one patient as early as the nineteenth year. Removal of the appendages in a case of this kind would not do any good at all. Oedematous, it was so soft that if laid on the floor water would run out of it, much more so than out of a thoroughly saturated sponge.

These growths shrink; they appear at any age of a woman's existence; they are not attended usually with the hemorrhages that are common in the true fibroids. This brings up Mr. Tait's classification of fibroids. He says the terms "fibromata," "fibroid" and "fibroma" should be dropped from our pathological and surgical nomenclature, and the term myoma applied to all these tumors. Although this comes from Mr. Tait, it should not go unchallenged. There certainly is a difference between œdematous myoma or true myoma of the uterus, and fibroids proper. Mr. Tait says, that in his whole experience in fibroids, and it has been a large one, he has failed to find a fibroid tumor of the uterus in which the muscular element has not predominated. That is certainly contrary to all pathologists except Mr. Tait, and Mr. Tait is not looked upon as being a profound pathologist. There are better pathologists in the world than Mr. Tait. There may not be many better operators, especially in Europe; but we have one or two in this country as good and even better, I think. Tait is off in his pathology. Smith disagrees with him. The late Fourmet disagrees with him. There is another class of cases in which the removal of the appendages does no good, and that is the fibroid proper in which there has been cystic degeneration, the so-called fibro-cystic growth. These, while the operation may possibly check the growth, do not shrink. It is the experience of great surgeons, especially gynecologists, that in pediculated fibroids—that is, a fibroid that has a long neck running out from the uterus—the removal of the appendages does not cure; it does not shrink them. It doesn't seem to me that the mere cutting off of the blood supply of these tumors is the cause of the checking of the growth. The ovarian artery supplies the smallest part of the blood to these growths, and the ligature never has gone low enough to include the uterine artery. I am not casting any reflection on Tait's operation where properly applied, but I wish to make this point: that as we understand uterine fibroids, the application of Tait's operation is going to be limited; it is being limited every day. Many cases of so-called recurring fibroid have proved to be sarcomatous growths.

One point in regard to the therapeutic treatment of these growths I have little faith in. Dr. Adams has thoroughly covered the ground and left very few loopholes for me to get at him in the discussion—that is in point of disagreement; but there is another side of this question. A patient will come to us with gangrene, the arteries protruding, etc., as the result of the prolonged use of ergot in these cases. Since I have been here, it has been my good fortune, or misfortune, to be called in consultation with one of the leading surgeons in the city. I arrived on Friday, and on Sunday he called me up by telephone and told me he had an emergency case, and asked if I would come out and assist him in the operation. I found a colored woman, who, I understand had been treated with ergot for fibroids. She had bled until she was pulseless; she couldn't raise her head from the pillow. The operation was quickly performed. An incision made in the abdominal walls discovered the belly full of blood and an extra-uterine pregnancy with a fibroid as large as a cocoanut, or may be larger; a tear of the broad ligament and fallopian tubes, extending so deep into the fibroid uterine structure that there was nothing left to tie—nothing remained except to do a hysterectomy, which was accordingly performed. This case I understand had been treated by ergot. I don't know who were her physicians; I don't know how long the treatment had been carried out. Possibly the surgeon is here and can tell us more about it.

Dr. Lanphear: The paper of Dr. Adams is certainly one that should interest us all for the reason that some cases of fibroid tumor of the uterus are inoperable. I think it may be laid down as a broad rule, sustained by the experience of every one who does much abdominal surgery, that every case of fibroid tumor of the uterus in which the growth is continuous, imperatively demands operation; but there are certain cases in which, because of peculiar circumstances, operation might be too dangerous to be undertaken unless in extremest urgency. The patient might, perchance, be too ill from other causes, as in two or three cases I have under observation at the present time. They might be too ill to undertake an operation; or on the other hand they may be in the class of cases that comes under the observation of Dr. Adams in his clinic—colored people who were entirely too poor to pay the expense of an operation and the hospital bill. In each of these instances, then, we must have recourse to something beside surgical interference, however much we may desire hysterectomy. In such cases, we may have recourse to the treatment advocated by Dr. Adams, watching very carefully for symptoms of ergot poisoning; or we may make use of electricity. I don't mean by the use of electricity the treatment by acupuncture, but simply the galvanic current applied with an intrauterine electrode and one applied outside. In one case that came under the joint treatment of Dr. —— of this city, and myself, a very large fibroid tumor, we made use of electricity simply because the patient couldn't under any circumstances, undergo the surgical operation which we both advised. In this instance, the tumor was much larger than one's head. By the use of sixty to eighty milliamperes for a period of four or five months,—without puncture bear in mind, the simple intra-uterine electrode with the positive electrode playing upon the belly—this tumor was reduced about to the size of my fist. This was between three and four years ago. About two months since I examined her, and the tumor is still about the size of my fist and gives her no trouble. Although this was a case in which we desired to operate but could not, we accomplished very much by the use of electricity. Ergot had utterly failed in this case. She had taken ergot from a prominent physician of this city for three or four years before she fell into the hands of Dr. —— and myself. So that in cases where we cannot operate, we may have recourse to the treatment advocated by Dr. Adams, or to the electricity treatment. My great objection to the therapeutic treatment or to the electric treatment is this: That, however skillful you may be, there is no possibility by our present means of making an accurate diagnosis. The case that has been referred to by Dr. Cordier, was one that my friend Dr. Adams had seen and had advised the use of ergot, and I think also of the pussy willow in the formula which he gives. She had taken this ergot for two years, or nearly so, under her attending physician. The operation mentioned by Dr. Cordier having been made, the specimen was examined and found to be that variety of tumor which we know as the œdematous myoma. In spite of the ergot treatment and in spite of the rest treatment, it had continued to grow indefinitely and would have continued to grow, I have no doubt, in spite of the most energetic use of ergot. In such a case as that there was no means to determine in advance of the operation, that it was of the variety known as œdematous. It couldn't be distinguished from a fibroid by any means except by the rapid and continuous growth, and yet ergot might have been used to this day without any relief.

Dr. Adams: What time did you operate on this woman?

Dr. Lanphear: I think it was last May, but she had been taking ergot I know for eighteen months or two years, according to the attending physician. He was present at the time we made the operation for the ruptured tubal pregnancy. In the third case, also under ergot treatment, operated upon by myself about four or five months ago, the trouble instead of being simply fibroid as diagnosed, proved to be carcinoma. I have a specimen that shows very beautifully, in still another case, that had been under ergot treatment by a medical practitioner in this city who said that he could cure the case. I removed, by supra-vaginal hysterectomy, a large fibro-sarcoma; it was as pretty a case of sarcoma as one could well imagine. I simply mention these cases to prove the assertion I have made that we cannot, in advance of an operation, tell whether a case is one of fibroid tumor, one of œdematous myoma, or one of fibro-sarcoma (fibrous sarcoma); and I am sure there is no gentleman here but will sustain the assertion that every case of œdematous myoma, as well as sarcoma or fibrous sarcoma, should under all circumstances be removed if possible. Therefore it seems to me that the treatment advocated by Dr. Adams should be limited exclusively to those cases in which it is impossible to operate.

Dr. Schooler: I was afraid that Dr. Adams' paper would share the fate of so many papers that are read just at the close of a session, and that the salient features would be lost sight of; but I am glad to see that it is not forgotten this morning. The intra-peritoneal treatment of the pedicle in cystic tumors, was a great step in advance in dealing with tumors of that character. The extra-peritoneal treatment of the pedicle in fibroids was equally as great a step in advance in those cases; and at the present time and with our present knowledge, it is practically as near to the ideal operation as we have—as we have with any other class of difficulties. I would not discourage investigation, and it is not the tendency of the profession to discourage investigation in any line; but I feel that with our present knowledge there is a very narrow limit for the other methods of treatment of this class of cases. I do not believe that they should be limited entirely, as the last speaker has said, to the treatment of inoperable cases; the limit should probably be broader than that; and it might be instituted in cases that have not caused serious symptoms. Pressure symptoms are absent; the tumor is of slow growth; and the urgency for operative procedure is not great—always keeping in view the fact that the delay should not be continued too long; that treatment should not be kept up until complications become too great to afford a reasonable opportunity for the safe removal of the growth by operative procedure.

So far as is concerned the operation of removing the ovaries and cutting off the circulation with a view to destroying the vitality, or starving the growth, the method only partially accomplishes the object. But the blood vessels in all these pathological conditions are not in their normal position and they are not normal in size. The anastomoses are more frequent and the vessels are larger and more numerous; and removing the ovaries, or the ovaries and the tubes, as a rule, only partially accomplishes the object. The uterine arteries are not disposed of, and frequently the enlarged new branches and the enlarged old branches are not interrupted; and it is at best, in many cases, a blind attempt to control a portion of the circulation. Perhaps it would not be advisable to entirely cut off the circulation. When the circulation is cut off the growth is deprived of its nutrition and it shares the same fate that any other portion of the body, normal or abnormal, would share for want of nutrition. Gangrène or sloughing or breaking down would possibly occur in a great many cases, and, being enclosed in the addominal cavity, would be attended with bad results. But if it were possible to cut off the entire circulation, there would be little added to the gravity of the operation in removing the tumor, which could be done quite as easily as depriving the growth of the entire circulation and its consequent nutrition. When the pedicle is brought out of the abdominal cavity, or a pedicle is made and treated as extraperitoneal, we have it in the most favorable condition for surgical treatment. We have it in a position where it can be observed, where the circulation is cut off and the sloughing is outside and is not likely to be taken up and absorbed in the quantity or with the rapidity that it would be if it were allowed to remain in the cavity. Hence the intra-uterine treatment of these growths does not give the results, and does not offer the advantages and the promise that does the extraperitoneal method.

It has always seemed to me that the treatment of these cases by electrolysis, is a good deal like the treatment of tubal pregnancy by electrolysis, in that one is never sure of the diagnosis. We have some men in our vicinity who can recall a long list of extra-uterine pregnancies successfully treated by electrolysis; but I have always suspected there was something at fault with the diagnosis—the results have been too promising entirely, and the cures have been too rapid and too numerous.

So far as the administration of remedies is concerned, it has always seemed to me that it bore about the same relation to these cases that medical treatment did to prostatitis in the old man, not prostatitis but true hypertrophy—it was a good deal like pouring water into a rat-hole. Still maybe there are some conditions in which it does good. There are some gentlemen who have an abiding faith in the use of drugs; they no doubt sometimes do good without clearly preconceived ideas of just how they are going to effect a good result. For that reason I would not discourage the views set forth in the paper, nor the views of any one who is attempting to make an advance or to produce something better or safer than operative procedure in these cases. It would be a very great benefit and a boon to humanity if something less dangerous and less formidable would give equally as good results, but I believe that cases should be restricted to two classes; those in which operative procedures are imperatively demanded and those in which operative procedures are not among the possibilities.

Dr. Cordier: I want to say a word about cutting off the blood supply. I mentioned that a little while ago. That is the smallest part or principle underlying Mr. Tait's operation. As Dr. Price said yesterday, you must remove every vestige of the ovary and cut the tube just as close to the uterus as possible. It seems due to the nerve supply, or to the association of the ovaries with the uterus, that the removal of the ovaries does the good in Tait's operation. It isn't the cutting off the blood supply. It certainly shows that the presence of the ovaries has something to do with the growth of these tumors, from the fact that the removal of them in suitable cases, stops the growth of the tumor.

Dr. Dewees: Among a number of cases, I have one which may more or less illustrate the position the writer has taken in his paper. About two years since, there came under my observation a case which had been treated by three or four able men. She had a nodular enlargement of the breast close to the nipple, but without a depressed nipple; very painful to the touch, or from pressure of the garments.

She was at the same time suffering from irregular, intermittent or periodic excessive hemorrhages from the uterus. The case had been diagnosed by two physicians to be carcinoma of the breast, or scirrhus—at least the word cancer was used, for the patient told me that the others had diagnosed it as cancer. She was absolutely averse to any operative procedures. To me the question arose as to whether the excessive hemorrhages were due to a cancerous growth in or about the uterus, or not. The patient was thirty-eight years of age, an important point in the case. Dr. E. A. Switzer, of Salina, Kansas, anæsthetized the patient for me and I endeavored to make a thorough examination. I make suprapubic pressure with the left hand, with the right hand fixed against my body. With all the pressure possible I gather up the tissue and force it in as far as I can. I succeeded finally by getting my hand into the vagina, and my finger into the cavity of the uterus, and by so doing was enabled to make out what, in my judgment, was a fibroid tumor. It was very hard to the touch and was almost entirely within the cavity of the uterus. It was undoubtedly a submucous fibroid. I announced to the husband, who was present, that it was a beautiful case to incise the capsule and bring out the tumor, but he opposed it on the ground that she would not consent to it if she were in her senses, so I had to desist. The next thing to do was to give some medical treatment whether we could give promise or not. I resorted to ergot internally, together with arsenic and syrup of hydriodic acid, and in six weeks time the irregularity of flow and the excessive hemorrhage had ceased. The tumor undoubtedly had diminished, and within the last year her menses have become regular. The nodular enlargement of the breast has entirely disappeared. The woman is unquestonably enjoying the very best of health. She is now forty years of age and mensturating regularly.

The point I wish to bring out in this case is this: That it appears in my experience, limited as it may be compared to some of the shining lights that are here to-day, that the nearer the tumor is located to the uterine cavity, the more good effects will we get from the ergot treatment, and the further away it is located from the uterine cavity the less good effects will we have from the ergot treatment. It resolves itself to a nicety in diagnosis.

Dr. Ward: Dr. Adams has thrown the gauntlet down and I could not be truly friendly to him if I didn't handle him as roughly as possible. He will think I have gone square back on him if I don't. Some want to recommend Dr. Adams' treatment because there is something new about that treatment. But I don't know what he gives; I don't know what that medicine is nor where I can find it, nor what he expects us to do. I want to know what is this medicine that he gives besides ergot. Ergot is quite familiar to all of us so far as the *ergot* treatment is concerned. I am reminded by the reading of his paper, of a little experience I had last summer, with a case that came to me for treatment. She had been nineteen years a sufferer. The case has been reported, so I will not report it again. The patient had in her possession letters from Dr. Gross, Dr. Blackford and other prominent physicians in the east and west, who had examined her and said to her that there could be nothing done in the way of surgical operation, but "we will give you ergot; we will give you turpentine; we will use ergot by injections into the tumor," and in those letters they have outlined the treatment. They used blisters, and Dr. Gross especially recommended the German—or perhaps the English leeches; imported leeches anyway—and they depleted the lady so greatly that he finally had to say to her in his letter, to use but one at a time; that was sufficient, a good strong healthy leech. That lady had, at that time, a tumor probably as large as this spittoon, because her abdomen was full and had been for many years. But the doctor insisted that nothing like a surgical operation should be attempted; it would be suicide on the part of the patient and homicide on the part of the doctor. I hesitated. Now it seems to me that when we talk about ergot in these fibroid conditions, we are striking nothing new at all, but we are going over the same old ground that has been gone over for hundreds of years, I don't know how far back, and tried in every shape, form and manner, and discarded as perfectly useless in almost every case. Admitting that it will occasionally do some good, no doubt by helping to control the hemorrhage, and may reduce the size of the tumor, it does not cure the patient, but postpones the doing of an operation until it is too late, when it could have been done safely when first observed. You postpone the operation until it becomes serious; until the patient is broken down or in a condition in which she can not be operated on. The treatment is not new except the new medicine that Dr. Adams has got here, and will tell us all about in due time; and if that be true, it is hardly worth while putting on record that we recommend the use of ergot in those fibroid tumors. Of course they must be defined; we must know what we have; they must be diagnosed accurately, and we must know that the *only* treatment is by going into the abdomen before we resort to operative interference. If ergot is to be used as a last resort, we had better make an exploratory incision; it is just as safe as cutting the finger nails, safer probably.

I remember very well one of my first patients. I was as green as I am now and maybe a little greener. I took counsel of my text-books and the instructions I received in college, and what did I do? I put the lady on ergot and all those remedies, and that dear mother and wife died a death that now I am ashamed to remember. There was nothing done but the ergot treatment; nothing could be done at that time. Now we have arrived at a stage where we do know that operations for removal of the appendages help the majority of such cases and cure a large number entirely, and that the operation is safe. Look into the pelvis and if you find that the appendages are so adherent that the removing of them would be tearing them out bodily, root and branch, and if the tumor be so adherent that it would have to be pulled out in order to be rid of at all, then do a hysterectomy. If you can't do anything, close the abdomen. Let us not be so cowardly as to give a patient ergot when she has a large tumor in the abdomen, and say to her that "it is the only thing to do for a year or two, and if you get through that year or two, if you should happen to be alive, then we will try an operation." Let us not do that in this western country.

I wish to refer to a case that came under my observation about eight or nine months ago. She lives in the country, and has a history of four or five years of suffering, most of the time in bed. She has an impacted fibroid filling every crevice of the pelvis. You can't get into the rectum for the fibroid condition. She has suppression of urine. That woman is now sick in bed. She came to me for an operation and I examined her and charged her too much money; I was too high priced for her; she was not worth as much as I thought she was. Her husband was very wealthy but he wouldn't pay the bill. She came to Kansas City to one of my esteemed friends, and he said to her "No! an operation would be dangerous. You are alive now, and if I were you I would go home." She went home and probably will never get off her back. When I saw her she weighed 170 lbs. Now she is reduced to a skeleton. Why? because everybody is afraid to touch that case. I believe hysterectomy could have been done and her life saved. I wanted to speak of this to show you that we are too careless and too cowardly, and we allow our patients to go home and suffer and die.

Dr. Young: I have a case in a country town in Iowa, which I was called to see last spring. She had a round smooth fibroid between six and seven inches in diameter. There is no pressure trouble, but there is a little loss of general flesh; she goes about the house and does her work. Her husband is a farmer and doesn't have a very great deal of means. They are good people; the lady is a good woman. I was called to see her in connection with the doctor attending her, to determine what was the matter with her, whether it was pregnancy or not. He and I made up our minds that it was a fibroid—solid fibroid. It has been over a year since the tumor was first noticed, or the enlargement there. She heard that I was coming down here to this meeting, and she wanted me to ask Dr. Price what he would do. Now she is able to do her work in a manner and get about. She has had three children in her time, but they are all dead. She is about thirty-nine years old. She says I must ask Dr. Price what she should do. They haven't very much money, and I am not able to do a hysterectomy; I haven't the skill to do it. Now I rise simply to ask these gentlemen what to do. We have simply given her ergot, half drams three times a day for six months, and the tumor has apparently not increased any in size in the last four months. I rise to ask Dr. Adams and these other gentlemen what I should do.

Dr. King: Before Dr. Adams closes I have a question I want to ask him. In his paper he didn't give us the result in but three cases. Now I wish to know what the result was in the other thirteen cases.

Dr. Black: I should like to make just a few remarks owing to the fact it was apparent to me last night, in the paper the doctor read, that he stated his case with a degree of fairness that does not seem to be allowed by those who oppose him in his statements. I don't think that he claims that he can radically cure these cases by the administration of ergot. I think that very often those who are the advocates of any certain measure are usually misinterpreted. I don't think that Dr. Price would do that. There certainly will be some conditions following an operation which will not permit us to claim that the cure is radical as that term is usually employed. Now I had occasion to observe, merely incidentally however, some three or four years ago the work of Apostoli in this direction. I went there more out of curiosity than to make an effort to learn anything new; and to my surprise the extravagant claims that had been made for the method were not claimed by him at all. The only claims that he made in these cases, were that possibly he might reduce the tumors, he could certainly control the hemorrhages and certainly control the pains—which I believe is true, because I interrogated these patients personally and wouldn't accept the statements of the doctor. But no such claims as are usually made in behalf of electrolysis were made by the advocate of the method himself, or by his assistants. Another point that is well to consider: we frequently see cases, or at least occasionally see cases, where the patient is hardly aware of her condition herself. I recall several large fibroids—as large as a man's head—of whose presence the patient was not aware until attacked by peritonitis. One was a pediculated fibroid; I was called in to see her when she had suffered from acute peritonitis and she wasn't aware of this tumor, lying practically loose in the abdominal and pelvic cavity, until peritonitis produced adhesions. I removed that after the peritonitis subsided, by an abdominal section, the only thing that could be done for it. It appears to me too, that as Dr. Price said last night, it is well for us to bring up the testimony to the very date of the taking of the evidence; that would apply with equal force to all operative procedures. Let us see now after a hysterectomy is done, or any operation for the removal of these growths, what is the condition of the patient afterwards. Is she absolutely cured? I don't wish to be understood as being opposed to these operations; I think it is a thing to be done in all cases unless there is something positively contra-indicating it. Isn't it true that the pedicles will sometimes be left in communication with the cervical canal and will leave permanent fistules; and isn't it true too, that it will occasionally produce certain effects by dragging upon the adjacent organs after the tumors are removed. I am speaking now of extra-peritoneal operations.

These are things that ought to be taken into consideration. I have at present a case under observation, who was not aware of the presence of one of these growths. She was unmarried and a nullipara, and after attaining the age of fifty-four, some four months ago commenced to menstruate, menstruation returning at regular periods, every month for the last four months. She began to complain of dragging pains in the pelvis, and upon examination I found the whole pelvic cavity blocked with this growth. There was complete reversion of the axis of the uterus so that the os pointed above the pubes. The growth was intra-ligamentous and the cervix was involved. Now here is a case where a woman, four years after the cessation of the menses, after the menopause had been established, who has been carrying a tumor perhaps for months and perhaps for years, without any symptoms at all. There are no pressure effects from this growth. She urinates as usual, probably a little constipated; and yet when she is on her feet a great deal, she complains of a dragging sensation. This growth extends into the ligaments; it is intra-ligamentous; certainly one in which very little could be hoped for in an operation to make a pedicle. This would have to undergo a process of decortication for removal. I take it that in some of these cases, probably a great many, the disagreeable effects of extraperitoneal pedicle treatment might be obviated by the entire removal of the uterus in addition, so as to make it absolutely radical, if it could be done. In the case I speak of, I don't think very much could be hoped for in making a pedicle. In fact the question arises with me in this case, might it not be as well to watch the patient and give the treatment that the doctor speaks of? In fact I have put her on that treatment; on the very combination that he speaks of. Might it not be just as well to wait? The growth is not very large; the woman is away past the menopause; and unless some symptom be produced, and we don't get the effect Dr. Adams speaks of, wouldn't it be just as well to wait and see? That tumor might undergo retrogressive changes because the menopause has already set in, because the pressure effects are not very decidedly manifest and because finally, it would involve more than ordinary vaginal hysterectomy. It certainly is an operation that would involve considerably more—requiring either drainage through the vagina or stitching the capsule or ligaments to the abdominal wall. The statement has been made here by one of the gentlemen preceding me, in a line that I am more specially interested in, that we can hope for probably as little in the treatment of these fibroids by medicine as we can hope for in the treatment of an hypertrophied prostate by medicines. I think that his latter statement is absolutely correct, that the effect of medicines so far as reducing this hypertrophied prostate is absolutely *nil.* But little as I have seen of the work of Apostoli, I am sure to a certain extent it can control the symptoms if it cannot control the disease. And in some of these very large fibromata, if they can be reduced to the extent Dr. Adams claims, wouldn't it be easier than when they are very large and complicated in their surroundings, after the reduction to remove them?

DR. PRICE: There are some few points that stimulate me to take the floor again. First of conservatism. We are all interested in that. Dr. Ward calls our attention to a patient, and this gentleman from Iowa also calls our attention to a patient, suffering from tumor. She is anxious and we are all interested in her. We have all had too many painful experiences from delay due to conservatism and conservative counsel—and due to high fees. Some of the most distressing cases I have known in surgery, have been due to a fixed fee by an operator supposed to be the only one in the land, at home or abroad. For instance, I remember very well years ago, early in my experience, one or two large cystomas that had been seen by the Atlees, one of them the wife of a poor farmer on the Reading road from Philadelphia, in which one of Atlees fixed a fee of six hundred dollars. They knew no one but Atlee. It was more than they could afford to pay; they could not burden themselves with such a debt. She carried the tumor and lived a long life of misery—she had to go to bed and stay there; and when I entered the room, some four years after Atlee saw her last, I failed to see her face over the tumor. It was huge—barrel-like. She was a little skeleton, very much like a child dying from marasmus or hydrocephalus. It was absolutely hopeless; she had a thready pulse. I told her husband she was dying and could only live a few hours; and I told her physician that I might just as well cut her throat as to incise that abdomen and attempt removal. She died that night.

Now, sir, it is possible to take too high a ground in many matters, nor do I think it will pay. I will just cite one case, a recent experience in my own practice. For instance last spring, or a year ago probably, some one called my attention to a poor woman in Texas, the wife of a church janitor. You can imagine her poverty, the wife of a Texas church janitor. The good ladies of the church wrote to me asking if I could take care of this woman if they made up a purse for her travelling expenses. I promptly telegraphed them to send her on. They placed her in a berth, left her in charge of the porter and paid her way to Philadelphia. I had a patrol wagon meet her there. She had been in bed about six years; treated in four states by thirty-four doctors. Conservatism! I am talking about conservatism, delays and procrastination. No man has a right to follow surgery that hasn't courage thirty-three vertebræ strong—a full column. Her whole condition was distressing; she was greatly emaciated, and the travel had not benefited her. I waited three weeks for her to rest, and then a section was done and I fixed up the uterus. Everything was torn up; she bore the operation badly, but re-acted fairly well and recovered nicely. She had been six years in bed, and for awhile before going to bed, she had used crutches and she brought them along. She finally got so she could take a walk through the square in front of the hospital. I told her she could go home and she did so. Not long after, some good woman with more wealth—not the wife of a janitor—heard of her, wrote to her, traveled a hundred and fifty miles to visit her and found her making pickles, getting ready for the winter. This woman at once telegraphed me and asked me what my charges would be, and the fee I mentioned to her was no small one, I assure you. I stated my fee and she telegraphed to hold a room for her and have a nurse to meet her. That woman paid me for the two operations and for the board of the two patients. Now, sir, I would advise you to cast your bread upon the waters, and don't hesitate; if you are going to operate on the rich you must take care of the poor, and if you take care of the poor the rich will take care of you.

Now Dr. Adams and others have referred to what takes place in the kidneys and urine from pressure symptoms and delay. Two or three cases have been cited, and I will simply call your attention to the character of the pressure symptoms, by alluding very briefly to two cases only a few days ago—two weeks ago last Saturday. A prominent Kentucky operator, a man of good judgement and skill, telegraphed me that he had sent a patient on the Limited; at the same time a Trenton physician sent me a colored woman with scant urine, with a rather distressing letter, stating, "Doctor, I fear I will give you a death." The woman for the first three days passed between two and five ounces of urine; the Kentucky patient passed more, say twenty or twenty-four ounces. Both of them were being purged, and I found traces of albumen in the urine of both. Saturday a week ago, I did the two hysterectomies; both huge tumors; both with pelvic fixation; pressure symptoms as marked as you could possibly have them. The Kentucky patient, in the operation, fared easily. It was necessary to make a pedicle in both cases. Just here I will allude to what the Doctor said in his able discussion of the subject intra-ligamentary troubles,—because it is too important to drop. In all these cases large tumors are simply play compared with some of the smaller ones. You needn't fear the large ones if you once learn how to make a pedicle, and you can make a pedicle in any large tumor and you need not fear the broad ligaments. After the first operation the Kentucky patient passed thirty-seven ounces; the second patient passed seven ounces, a difference of thirty ounces in the two patients. Both re-acted nicely and the urine increased in the second patient, and in the other it lessened; one increased an ounce, or two ounces a day. Neither of them had nausea; both had been freely purged; neither of them had very much to drink for a day or so; it was withheld because neither were drained, and I wanted to drain the lymphatics so that they might digest what little fluid accumulated. I have referred to these two cases because that is just what takes place in all delayed cases.

I take just this position with patients coming to me with any ovarian trouble—I mean serious troubles, vicious troubles, large tumors—if the husband hesitates, if the patient hesitates, I simply say to them, "My good woman, please have this attended to while your condition is good, favorable and promising; don't wait a year until you see you are going to die and then come to me and ask me to remove this—when it takes only a feather to depress the beam! But while your chances are good and about perfect, have it removed! Don't wait until a year from now; that is the eleventh hour work; you must anticipate what will come." Nothing pleases me more than the fact that in many cases I have simply driven patients to early operations by telling them flatly "If you come to me in one year or two years, dying, I won't touch you; you must go to some one else!"

Now in regard to Paris. It is a delightful city; I have thought sometimes of going there myself; it is a very nice, pretty place to go to and get big fees from Americans. Just two incidents. Apostoli is a delightful French gentleman; no one has a right to derogate him or his treatment of Americans. He is very much better than some other European tutors who class all Americans as tramps and globe-trotters. A very lovely woman from Oakland, Calfornia, had some tumor, and I received a letter from a prominent physician there asking me what my charge would be to come to California and do a hysterectomy—two full well-written letters stating that this lady had been in Paris two years; she had received careful treatment at the hands of Apostoli without benefit; the tumor contimued to grow, the pressure symptoms were marked and she decided, after two years tinkering, to have this tumor removed. My fee was too high, and the local surgeon removed the tumor. He did it well and she got along nicely. A short time after, I was asked to see one of the wealthiest ladies in Germantown, the wife of a railroad king. She has spent two winters in Paris and enjoyed it, and in all probability she will go back to spend the third and fourth. Apostoli says she has a fibroid. I scarcely agree with him. It is my impression it is advanced tubal and ovarian disease with adhesions. I failed to find a fibroid but I did find angry tubal and ovarian disease. Had I urged section in this case I could have gotten consent, but it was an unpromising case. She enjoys living in Paris and I left it very much to herself to elect what she would do, it not being a fibroid and not dangerous at that time.

A speaker has alluded to the broad ligaments. Many cases have to be decorticated, and you can't do them without. You must learn to decorticate and deperitonize them. You may incise the peritoneum clear up to the cornual level, to the very root of the tube, and strip down the whole anterior and posterior faces to the level of the internal os. *Never* make a pedicle of tumor tissue; *always* make it of healthy cervical tissue and fix it in the lower angle of the incision. You can remove it if you like by the flap method—drop method; flap the pedicle and stitch it as you would the flaps in an amputation of the arm. Amputation is an unsafe and dangerous procedure. It has been practiced freely in Germany by Schroeder, Martin and others. These men cannot do it with a mortality below from thirty-five to twenty-four per cent., and if these men cannot do it with better results, it is folly for us to try it. The complete removal of the uterus is an easy and fairly safe operation, but the results have not been so good as by the extra-peritoneal method. It may be done and quickly done, and it is not necessary to have a lot of instruments, crutches and the like, to push up into the vagina to define the vaginal fornix. After delivering the tumor you can open the vaginal fornix as easily as you could incise the hymen, cut out the tumor, leaving enough tissue on the two sides to make your flaps safe—simply make a window in the posterior vaginal fornix, tie off four or six stumps around the bladder on the two sides. It is a safe procedure and it is not necessary to rely upon crutches, guides, guarded crotchets and the like, to define the vaginal fornix.

As to the deterioration of patients. The healthiest and prettiest women in Philadelphia are women who have undergone section. In a beauty show, I believe the women that have had diseased appendages or fibroid uteri removed, would take the prizes in good looks, color, vigor and usefulness. In my clinic it is interesting to present these cases and call the attention of visitors to the fact that this woman, notwithstanding she was emaciated, useless and lived a life of starvation—had been destitute of the bare necessities of life, with a cruel and barbarous husband—has been restored to health and usefulness. Among the poor it is exceedingly common for the husband to contract disease during the lying-in, if I may call it such, of the wife. Any number of husbands, in the large cities, will contract syphilis while the wife is in bed after a section, and in three or four months, the wives come to me with syphilis. To me it is one of the most distressing features of the matter. First he contaminates her with gonorrhœa and she has to suffer the risks of section, and then he gives her some disfiguring scaly eruption that she has to be treated for for several years.

The retrograde changes alluded to are very common, and this full discussion has served to fortify my position in regard to early interference while these tumors are healthy. One gentleman has reported some interesting cases of sarcomatous changes. It is very curious that in all these tumors, in some form or other, retrograde change takes place. The allusion to sarcomatous change and the difficulty of recognizing the precise nature of the tumor, is correct. But early in the growth of such tumors, before these changes, it is not so difficult.

In conclusion I want to say that this is one of the most complete discussions I have had the pleasure of listening to for some years. It is a very much better discussion than takes place where every speaker gets up with a compliment and sits down with an apology.

DR. ADAMS: The discussion which the paper has received is an evidence of the importance of the subject. I thank you for the fairness with which each of you has handled the subject. It seems to me, however, that with everyone there has been caution displayed in putting definitely on record a choice of any particular method or operation or means of cure—to the same degree possibly that the author has done in his dissertation.

There are some questions asked which perhaps I ought to answer. Dr. King asks what became of the thirteen cases, the result of which I did not give. I have six cases that furnished the histories illustrative of my observations. These six cases had been under observation so long and the treatment had been carried out for a sufficient length of time, as I supposed, to allow some data from them.

The balance were cases that I did not feel justified in including, simply because you could say to me, "You didn't see the patient long enough; you don't know that it is true." One of them, as I told you, was a cystic tumor which kept increasing, and I recognized how useless the treatment was and advised an operation but did not succeed in getting it. In fact, in a large proportion of the cases which came under my observation, I endeavored to obtain an operation but didn't succeed. You must recollect that we have in this town no place where I could provide for patients except I put them in the care of the city. My clinic, of course, must be managed according to attendant circumstances. When a woman comes to me for treatment I must do the best I can under the circumstances, and only the best. It would be useless for me to say I can do nothing for you without operation. That might be my desire and might be the ultimate result. It is brought out in the discussion that under treatment the patient, if benefitted, was in a better condition for operation. That was the condition in the case in which I did not tell why I operated.

Unfortunately the discussion has covered so wide a field, and possibly my paper covers too wide a field, that it is impossible to take up all points; for instance, the question of pathology and histology of uterine fibroids, their origin and causation; the question of the growth, life and decay of the uterus, which enter into this subject. Certain operations have been advocated to bring on premature menopause, or the cessation of menstruation, in order to cause a cessation of growth. Just so, theoretically, in my treatment salix niger which is a sexual sedative, a repressor of chronic mucous discharges, a diuretic and tonic, combines excellently with ergot to bring on, theoretically, a therapeutic cessation of sexual activity and, in consequence of this, a cessation of growth. I believe that theoretically that is correct and answers Dr. Ward's question. There is no question about this fact, that uterine fibroids do, according to a law of nature, undergo atrophy without the help of a physician.

You cannot, no matter what your individual beliefs may be, get up on this floor and tell me that the observations of men capable of observation, carried on through years and with the best opportunities, is absolutely false. You cannot tell me that; you must accept the concensus of opinion of men all over the world. Now, I believe that when you take that under consideration, you cannot tell me that any one method is the only method; and I believe that I have been truly conservative when I say the treatment should be elective, according to conditions and indications. Courage without discretion, although you may have as many vertebræ in your spinal column as a serpent, is no better than the conservatism which means ignorance, sitting down and doing nothing. Not endeavoring to progress is not conservatism, although when they talk about conservatism they illustrate it by cases which have undoubtedly fallen into the hands of a great many men of such character. I am not objecting to operation. I say true conservatism takes a broad view of the field, and is willing to accept every means and method, and to leave out simply that which experience has proven to be false. I have endeavored in my paper to carry out that line. I have assumed that a great many things which might be said about the life, growth and ending of fibroid tumors are well known to you without mentioning the question of sarcomatous degeneration. I wish to say that the part which the menopause plays is a moot question. You may believe that taking out the ovaries and tubes clear down to the uterus, will stop this growth, if done early in a certain class of cases—that that is the thing to do. And yet that question is disputed.

Woman is a dual individual; she has a life within a life, and you can take out the inner life without damaging the outer. And this too enters into my theory of salix niger. If the menopause brings about a cessation of growth, then the excision of the tubes and ovaries is certainly a correct operation. I cannot touch upon all these questions, but I want to cite at least one case. The statement has been made which might put me in a false light, that I saw a case of fibroid uterus in which I had recommended the ergot treatment, and she came under my treatment, or at least that I had seen her before the operation. I know I have in mind the same case because I asked when the operation was performed with reference to the case, and learned that there was ruptured tubal pregnancy and death, as the gentlemen stated—the death occurring before the physician could open and do the proper surgical procedure. That case I never saw. That case was put upon my treatment at the request of a physician who, I supposed, knew how to examine and diagnose what he was going to treat. In that case, I gave the formula and said, "if you have so and so, try it" but also said, "if it is like this case which you see lying upon the table—and I had a specimen right there, cystic tumor—if it is like this, operation alone is the proper treatment." I am not responsible because he had not something at the ends of his fingers, or possibly in the head, that ought to have bidden him be cautious. I believe she was on treatment for six weeks. I think they operated in May, for I distinctly remember that the time when I was asked the question was about six weeks before operation. I speak of it because I do not want to go on record falsely.

CORRESPONDENCE.

To Editor of Medical and Surgical Reporter: In Dr. Edson's article in the Medical and Surgical Reporter on "Fads of Medical Men," he refers particularly to the knowledge of the hereditary constitutions of his patients as an all important guide to the successful treatment of disease; and cites the old family physician in "Elsie Venner" as an example. He certainly is the old stereotyped doctor whose opinion is so earnestly sought by his families, not only for their physical, but their social and moral needs as well; who always arrives in the nick of time and, if worldly aid fails, ferries them across the river Styx. A magnificent character, unheard of in reality and doomed to oblivion with the good virtuous heroine, and brave handsome hero of the old novels.

To the laity, whose knowledge of medicine is a "dangerous thing" because of its minuteness, this idea of heredity and *strong constitution* and *different from other people* is quite common even amongst the most intelligent classes. The inevitable result of physicians expressing to their patients surprise at the non-effect of medicines that may have been administered; or perhaps the doctor wishes to flatter.

The writer claims that it is this individuality of cases that makes the practice of medicine so uncertain. This is partly true. There would not be the same dose of aconite, for example, administered to a weak anæmic woman as to a strong man; and yet two strong men suffering from the same disease, would receive the same dose if a similar result was aimed at. The former is the difference between an adult and a child, the latter is Dr. Edson's so-called individuality. Of course there are idiosyncrasies to be guarded against in the use of some drugs but they are rare enough.

Medical fads are not the results of physicians running after something new, but the demands of their newspaper reading patients, that make them often unworthy worshipers at the shrine of quacks and charlatans. I need only instance the Koch cure for tuberculosis that immature child of a theoretical brain, whose apparent brilliant future was so ruthlessly nipped in the bud by the hands of practical physicians who, at the importunity of their dying patients, yielded, I am sure in many cases, against their better judgment.

Dr. Edson also refers to another cause of medical fads, "To the blind maze of uncertainty in which the physician finds himself, and hails with delight anything that promises hopefully."

There are of course *mazes* enough only we sometimes close our eyes to what is apparent, and search for something hidden, something that no one has yet discovered.

"You may probe, you may cut,
  Up your case if you will;
But the same old diseases,
  Will worry you still."

Dr. J. William White in speaking of the superb Agnew, expresses surprise at the extreme simplicity of his prescriptions. The same was said of Sir Astley Cooper.

The future field of medicine will look to the prevention, not the curing of disease.

J. Newton Hunsberger, M. D.

Skippack, Pa.

GEOLOGICAL TIME.

In treating of geological time, as indicated by the sedimentary rocks of North America, Professor C. D. Walcott, of Washington, D. C., before The American Association Advance Science, conceded, at the outset, that it is uncertain and is in conflict with the teachings of some other sciences. The physicist, for instance, requires us to bring terrestrial time within the extreme limit of twenty or thirty million years. The geologist replies that he cannot bring his facts within such narrow limits. Sir Charles Lyell, basing his estimate on modifications of certain species of marine life, assigned 240,000,000 years as the required length of geologic time. Darwin claimed 200,000,000 years; Crowell, about 72,000,000; Geikie, from 73,000,000 upward; Alexander Winchell, but 3,000,000; McGee, Upham, and other recent authorities claim from 100,000,000 up to 680,000,000 years. Notwithstanding this wide divergence, all agree in thinking the duration of the globe so great as to make man's occupancy of it seem but a span.

The attempt in Professor Walcott's paper was to throw light on the problem from ascertained facts as to the evolution of our continent, which was outlined in the Archean period and has not materially changed since. Its areas were more clearly outlined in Algonkian time, since which the changes have all been above the level of the deep seas. Sedimentation as the result of denudation has continued with little interruption. During the Upper Cambrian time the broad Mississippi area was worn down and the mass removed was carried into the ancient Cordilleran Sea. The process then was rapid, as compared with similar work in other periods. Chemical denudation is by the taking up of material in solution. Murray, in describing the results of the Challenger expedition, says that 113 tons per square mile per year may thus be accounted for. Besides the lime, etc., precipitated from solution, there have been mechanical processes going on, as also the agency of organism. Most of this has been in comparatively shallow water.

Without following the steps in detail, it may be said that the conclusion reached by Professor Walcott distributed geologic time as follows :

Cenozoic (including Pleistocene), about..	2,900,000	years.
Mesozoic..................................	7,240,000	"
Paleozoic.................................	17,500,000	"
Algonkian.................................	17,500,000	"
Total time of sedimentary rocks......	45,500,000	"

In commenting on this table it should be said that the data for Archean time are doubtful. Also there are no sufficient data from the duration of animal life to fix geologic time back of about 10,000 years. The fact may be mentioned that while we have 55,000,000 square miles of land, there are 127,200,000 square miles of water.

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SATURDAY, SEPTEMBER 23, 1893.

EDITORIAL.

LAW WARRANTS AND THE DOCTORS.

The doctors should be exempt from legal process and from suffering the penalties of violated law no more than any other class of the community. They should stand equally amenable with all others, for any infringement of civil rights or infraction of the penal code.

We are safe in the statement, and we feel the fact to be a peculiarly fortunate one, that nowhere in the civilized world is the judiciary cleaner motived, more enlightened in the principles of law and equity, more strictly governed and guided by these principles nor more impartially just, than is the judiciary of our States. In this fact, physicians, considering their many exposures, find their greatest security from ignorant, malignant or low motived prosecutions.

Legal processes against physicians are sought through widely differing motives. Avarice, or gain with the least expenditure of money, time and labor, are probably the chief ones.

The civil or criminal warrant is very often sought by the adventurer or quack, as a means of cheap advertising, to reach a class of people they could not otherwise reach. They have panaceas which they are anxious to impose on the credulous and ignorant. Not one of the not small family of adventurers, practicing deceit and fraud, speculating with poisons, ever brought forward a remedy that stood the test of science or effected a cure. The profession is always ready to accept whatever contributes to the art of healing—it is not indifferent to improved remedies.

It is well known by physicians that very many cases get well without any medication—it is equally well known that there are many diseases for which no specific has yet been discovered. Of these we name but two: consumption and cancer. Yet, for these terrible maladies, the cure of which has defied the skill and best genius of the profession for centuries, there is constantly coming forward some adventurer, or syndicate of adventurers, who, for revenue only, seduce credulous unfortunates into the belief that an infallible cure has been at last evolved or discovered.

For the protection of the public health, the law, in the exercise of its right and in the discharge of a service inestimable in its value, provides a not too rigid inspection of food. Penalties are enforced for the sale of impure milk, decayed vegetables, impure or tainted meats. Even the great American hog, of the *four-legged* variety, does not escape this inspection. Yet the health of the individual and of families is left to the tender mercies of the trickery and deceits, and to the shameless imposition of the "sure cure" venders. These hucksters of marvelous remedies are permitted to go on trifling with human life unimprisoned, unfined and unwhipped.

For the practice and prevalence of these evils, viciously evil alike to individuals and communities, a damage and a reproach to legitimate medicine, the medical profession is not free from blame. It is only through the enlightened opinion, the teaching and acting of the profession, that communities can be brought to a knowledge of the mischief worked by quack preparations and quack practitioners.

Individuals and communities often need protection against their own superstitions and follies. Combating and overcoming these is largely the duty of an educated, experienced and honorable medical brotherhood and of a courageous medical press.

We appreciate the difficulty of "knocking out" public or individual superstitions. There are in every community, those who have a blind confidence in some panacea—only the teaching of experience will convince them of the absurdity of their faith. These superstitions exist not alone among the poor and ignorant, but can be found in quantity among those whose opportunities and station in life, place in their favor the presumption of common sense.

The unscrupulous medical adventurers, the "sure cure" men, search the earth for testimonials of the efficiency of their potions. To the names of some of those giving testimonials, the very euphonious and sweet-scented title of Professor is stitched on.

Figuring frequently in civil or criminal prosecutions is one whose characteristics are familiar to the profession, the blackmailer. He can wear garments of any cut or color, and he can travel under almost any alias.

In Indiana, recently, a verdict was obtained against a physician for alleged malpractice in setting a fractured limb. This precedent was followed immediately by four suits for malpractice.

In referring to these cases the *American Lancet* points a good moral: "We emphasize the fact that the Doctors could stop this state of things, because it was never known as a historical fact, that any malpractice suit was won against a doctor when all his fellows stood by him. We never knew a malpractice suit brought against a physician, unless some other doctor supported the bringing of the suit and promised to support the plaintiff by his own testimony.

"It would seem as if self-interest would induce every doctor to stand by his unfortunate brother, because, if that brother is mulcted of damages in court, it is but a short time when he too will be made to act as a defendant in a similar suit. It would seem as if self-interest alone would prevent any physician from encouraging or supporting a suit against any other doctor, even though he were his bitterest enemy. Certainly good common sense would teach any doctor not to play with such a dangerous 'boomerang' as malpractice suits against a brother doctor."

"There are plenty of blood-suckers in

every community that regard it as 'smart' to get all the service they can out of a doctor and then blackmail him after refusing to pay for the service they have received. If the medical profession of that neighborhood do not stand together in self-protection against this class of pirates, they will individually have occasion to regret it in the near future.

"The great curse of the profession in the past and in the present is, that it does not by its individual members stand shoulder to shoulder and meet the assaults of those who would degrade the profession. Were it strong in this practical brotherhood, it need fear naught from outside attacks."

With such a condition of facts there would be very few suits for malpractice. The quack medicine man would not be so ready to institute criminal prosecution of doctors for condemning his wares as useless, mischievous or dangerous. The truth is the blackmailer is always a quack and he is the bolder, as a trickster and a cheat, when he has a kindred spirit in a diplomaed doctor as his prompter and counselor. This is well illustrated by the recent arrest of an honored Tennessee physician, one standing high in his profession and in the esteem and confidence of the community in which he pursues his calling. What he did, he did in the interest of his community—and in maintenance of the dignity and honor of his profession. For this service, his profession and the community in which he labors and has his home, owe him a debt.

That physician is not of the best type, who, from fear of possible consequences to himself, does not give the warning of any dangers he may discern, no matter from what sources such dangers may arise.

The quack's invasions should be guarded against with the strictest of vigilance. It is a worse pestilence than any against which our quarantine protects us. They are unscrupulous and fear nothing but the detection of their brands, and this even, they do not fear sufficiently. They are compact of greed, low cunning and art, and succeed with impunity in smuggling their spurious goods into the homes of the unsuspecting and ignorant.

Charlatans can sue out criminal warrants for esteemed, honest and honorable physicians with impunity and with no other motive to serve than that of malice, greed and advertisement.

One strange, lamentable fact associated with these malicious prosecutions is, that there are those who set up the claim to be diplomaed graduates of reputable schools, to be honorable physicians and gentlemen, who *instigate*, encourage and promote these prosecutions.

There are counter proceedings, both civil and criminal, by which these men can be reached, and they should be made to feel their force as soon as they touch within the jurisdiction of the proper court.

It would be very surprising if, in the Tennessee case, the profession of the South, with its known fidelity to professional amenities, its splendid traditions, do not defend, as one man, their worthy brother, against an attack that has had its birth in malignancy and a wanton cupidity. Every little personal dislike and jealousy should be forgotten in the effort to defend a fellow and vindicate the profession. Give these ghouls a victory and they will seek other victims. There will be none secure.

A Paris wet-nurse has had an unpleasant experience. The Assistant Publique sent her an infant to nurse, from which she contracted syphilis. It was shown that the woman and her husband, prior to the arrival of the infant, were free from disease, and the woman had therefore no difficulty in establishing her case and securing 7,000 francs as damages. —*American Lancet.*

CURRENT LITERATURE REVIEWED.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES
for September.

Dr. Nicholas Senn contributes a paper on

Laparo-hysterectomy: Its Indications and Technique,

in which the indications and mode of performing the operation are fully discussed. The author presents for consideration the following conclusions:

1. Laparo-hysterectomy is justifiable when delivery through the normal passage is impossible without the mutilation of the living child.
2. It is absolutely indicated where the conjugata vera is less than two and a half inches, when obstruction is due to fixed pelvic tumors and advanced malignant disease of the cervix.
3. Mutilating operations on a living child for the purpose of effecting delivery are no longer legitimate obstetric procedures, as laparo-hysterectomy and symphysiotomy are life-saving operations for both mother and child.
4. Hysterectomy after laparo-hysterectomy is only justifiable if the uterus itself is the seat of a life-threatening removable disease.
5. Elastic constriction as a hæmostatic measure should not be resorted to in laparo-hysterectomy before the delivery of the child.
6. The uterine incision should be enlarged to the requisite extent by tearing for the purpose of diminishing hemorrhage.
7. The visceral wound should be closed by four rows of sutures applied in such a manner as to absolutely arrest the hemorrhage and completely separate the uterine from the peritoneal cavity.
8. Laparo-hysterectomy is also indicated in the operative treatment of single, large myo-fibroma of the uterus in young women when the tumor is located within or near the uterine cavity.
9. In such cases the uterine incision should be closed in the same manner as in operations on the pregnant uterus, and the bed of the tumor should be packed with iodoform gauze, which is brought through the cervix into the vagina, thus serving the double purpose as a hæmostatic tampon and capillary drain.

Dr. Gustavus Eliot discusses the

Disorders of the Nervous System Associated with the Change of Life.

The following are his conclusions:

1. At the time of life when the menopause occurs the various organs of a woman's body are likely to be in a state of depression as regards either their nutrition or functional activity, so that the normal equilibrium of healthy action may be easily disturbed, and abnormal action, the manifestation of disordered function, may be inaugurated and perpetuated.
2. The cessation of menstruation is an event of great physiological importance, and is perfectly competent to produce grave disturbances of the nervous system, if any predisposition to them already exists.
3. The more common disorders of the nervous system occurring under these circumstances are functional in character, and are associated with disturbances of functions in other organs, and especially of the digestive, circulatory, and hæmatopoietic systems.
4. In their treatment, attention should be paid to improving the general nutrition of all the tissues of the body, and restoring each organ to its normal activity.
5. If, after all the other organs have resumed the proper performance of their functions, symptoms referable to a disordered condition of the nervous system still persist, recourse must be had to remedies which act directly upon the nervous system, either by improving its nutrition or by modifying and regulating its action.

Dr. William Buckingham Canfield reviews the

Clinical Aspects of Immunity.

As the result of his observations and those of others, he makes the following inferences:

1. Second attacks are by no means so common as is generally supposed.
2. The more marked the signs and symptoms, and the more lasting the effects of the disease, the less often do we hear of second attacks. Measles and scarlet fever leave usually no marks, while smallpox leaves a scar; recurrence of the latter disease is less often claimed.
3. Those who insist on second attacks should assure themselves of the character of the first attack, and not take unreliable testimony.
4. When second attacks do occur, they generally come on long after the first attack, the individual is usually weakened in some way, and the attack is invited by the ingress of a larger number of organisms than would cause a first attack; while such conditions as fear, worry, fatigue, constipation, exposure, debauchery, etc., favor the second attack.

Dr. Herbert Snow, of London, contributes a paper on

Some Points of Importance in the Nosology, Pathology, and Treatment of Cancers.

The author calls attention to the fact that the word "Sarcoma" has acquired in medical parlance a significance almost as vague as the obsolete "soft cancer." As the word is now employed, it designates almost any cell-mass, of uncertain starting-point—in addition to tumors arising in connective tissue. He also thinks that the omission from the text books of those tumors designated as "round-celled sarcoma" would be a distinct gain to pathology as they are either examples of mixed sarcoma, or else fall more correctly into some other division of cancers. So too, he would relinquish the phrase "myeloid" sarcoma. "Giant corpuscles" or "myeloids," he states, are little fibrinous masses entangling leucocytes and are an indication of marked vascularity merely. They are not restricted to malignant tumors. They are common to tuberculosis, to processes of absorption or repair of bone as well as to sarcomata.

A point mentioned by the author of importance in the treatment of malignant tumors is that while the adjacent lymphatic glands should be extirpated in the removal of a cancer, it is not required in sarcoma, since the elements composing the tumor are not of glandular origin in the latter and should adjacent glands be enlarged it is a sign of general metastasis. In the removal of a carcinoma the adjacent glands should be removed even if they are not palpably enlarged.

Dr. James Hendrie Lloyd discusses

Hysterical Tremor and Hysterical Anorexia of a severe type,

reporting a case.

From his own observation, he concludes that the disease most simulated by hysterical tremor is insular sclerosis, or sclerosis en plaques. The points of this resemblance are as follows: First, the character of the tremor. In insular sclerosis the tremor is excited, and much exaggerated by voluntary motion. The movement of such a patient attempting to carry a tumblerful of water to his lips is characteristic. This movement is really not so much a tremor as a jerky to-and-fro motion. During repose, however, the tremor is almost, if not quite, absent. Second: The speech is often drawling, monotonous, or embarrassed. Third: The mental faculties are seldom involved, but the patient is often emotional. Fourth: The age coincides with that in which hysterical tremor is common; especially in women—from twenty to forty years. The points of contrast, however, are equally marked and definitive. They are as follows: First: The tremor most common in hysteria, that known as the "type Rendu," is persistent and very evident during repose. Even when the patient sits up it is much exaggerated, and imparts a sense of general tremor to the hand of the observer when he presses it upon the patient's shoulder. While it is much exaggerated by voluntary movements, and often is marked by waves of exacerbation passing over the patient's frame, it does not lose its essentially rythmical tremulous character, and become as jerky and incoordinate as in insular sclerosis. It is also much increased usually by simply watching the patient—a most significant fact. Second: While the speech may be affected, especially in typical hysterical ways, as aphonia, the drawling, stammering speech of sclerosis is not truly imitated. Third: The mental faculties exhibit hysterical perversions and lacunæ which are not common, in his observation, in insular sclerosis. Fourth: There are no pupil-changes or nystagmus. Fifth: Hysterical stigmata can always be elicited, as a rule, by an expert examiner.

Dr. W. T. Councilman contributes an article on "Gonorrhœal Myocarditis" reporting a case.

The remaining papers in this issue are: "The Full Correction of Myopia," by Dr. Edward Jackson; "The Clinical History, Nature, and Treatment of 'Milk Sickness,'" by Dr. J. Howell Way; and "Hæmolymph Glands," by Dr. Heneage Gibbes.

THE MEDICAL CHRONICLE

of Manchester, Eng., for September.

The principal article in this month's issue is a paper from the pen of Dr. M. Muret, entitled

A Contribution to the Study of Tubal Pregnancy.

The author reports several cases and reviews the opinions of various operators. He sums up the results of his investigations as follows:

(1) It will be found useful, in accordance with the course taken by the abortion, to distinguish between simple complete tubal abortion, where the entire ovum is expelled from the tube, and imperfect protracted tubal abortion, where portions of the ovum remain in the tube (tubal mole).

(2) Complete tubal abortion, accompanied by more or less severe non-recurrent symptoms, leads to the formation of hæmatocele, which may take any of the known courses.

3. Symptoms of acute internal hemorrhage are less marked in complete tubal abortion than in rupture of the pregnant tube; but appearances of severe shock occur which may be explained partly by the painful tubal labor pains in very excitable nervous systems, and partly by the influence of the blood upon the peritoneum. Sugar may occur incidentally in the urine in the acute attack.

4. In imperfect tubal abortion hemorrhage leads to destruction of the ovum, and to formation of a mole in the tube. When the ostium abdominale is open the blood effused into the tube passes by it into the abdominal cavity, where it leads to the formation of hæmatocele. So long as the degenerate ovum remains in the tube it leads as in protracted uterine abortion, to increasing recurrent hemorrhage, resulting in enlargement of the hematocele. The clinical aspect consists, firstly, in tubal labor pains and expulsion of a decidua, then in often-recurring attacks of labor-like pains with symptoms of internal hemorrhage, whilst locally, firstly a swelling of the tube, then the formation of a gradually increasing hæmatocele can be traced. During the attacks symptoms of acute anæmia may appear in a high degree, but the most characteristic feature is frequent recurrence of the attacks.

5. Occasionally with tubal moles a high degree of attenuation of the tubal wall is found at the point of insertion of the degenerated ovum, even when the ostium abdominale is wide open, and without there being much distention of the tube. This attenuation of the tubal wall may be best explained by a purely local expansion of the wall caused by the effusion of blood lying originally only between the wall and the ovum. It is probable that an increase of ex-

pansion and attenuation of the wall thus produced may occasionally lead to rupture of the tube at this place, even when the ostium remains open.

6. In protracted tubal abortion, with open ostium abdominale, the removal of abortional residue or the tubal mole, with conservation of the Fallopian tube, is to be regarded as the goal of treatment; in the most cases, however, removal of the whole Fallopian tube will be a necessity. Therefore, when protracted tubal abortion is diagnosed laparotomy is the only operative treatment possible, as every operation by the vagina is to be rejected.

7. Upon certain occasions and under conditions which are not thoroughly explicable, hæmatocele extra-uterina may be so constituted that it can be enucleated like a tumor. In laparotomy an attempt at enucleation should always be made before opening a hæmatocele.

8. The first period after interrupted tubal gestation occurs in the course of the first six to seven weeks following the complete termination of abortion or removal of the tube (in protracted tubal abortion). Subsequent diagnostic conclusions can occasionally be drawn from this condition of the catamenia.

In the "Clinic" department of the journal there is the report of "Some Gynecological Cases at Ancoats Hospital" and the report of "A Case of Scarlet Fever, with Infective Endocarditis" by Dr. Arnold W. W. Lea. The case proved fatal on the thirteenth day.

PERISCOPE.

OBSTETRICS.

Sugar in the Urine of Pregnant, Lying-in and Nursing Women.

L. J. Berberoff, basing himself upon investigations,—unfortunately not sufficiently numerous,—concludes that lactine only appears in the urine when more milk than is necessary is secreted by the gland. It therefore appears in the urine from the third to the fifth day, when the function of the gland and its production increase, while the infant still requires but little milk. On the other hand, however greatly the mammæ may be developed, when the child sucks out the milk entirely,—*i. e.*, when the equilibrium or production and consumption is kept up,—no sugar is to be found in the urine. When, on the contary there exist conditions in connection with moderately-developed mammæ tending to arrest the production of milk in them sugar appears in the urine. Among these conditions must be included changes in the mammary gland through which sucking is arrested, cracked nipples, mastitis, etc. In fact, sugar was most frequently found by him in parturient women suffering from these disorders.—*Vratch*, No. 16, 1893.

Method of Bringing Down the Arms After Version.

Magnus recommends a new method for bringing down the arms after version and delivery of the trunk, which should not be brought down too far before delivery of the arms. When these are about the neck, the hand should be introduced in the ordinary manner, two or three fingers being placed on the superior edge of the scapula, which is gently pressed downward. This will cause the arms to move suddenly and to come down without any further help. Others besides the author have successfully made use of this method.—*Ugeskrift for Lager*, 1893, p. 62.

A Case of Inversion and Falling of the Puerperal Uterus.

Primipara, aged 27. Fifteen minutes after parturition, the uterus became inverted simultaneously with the expulsion of the placenta. About an hour and a quarter later, Drefer was able to make the reduction. Recovery followed. Contrary to the opinion generally accepted, that the fundus uteri is the starting-point in inversion, the author emphasizes the fact that one must consider that inversion is effected from below upward, which assertion is fully confirmed by the case in question.—*Norskmagazin for lagevidenskaben*, L, iii, 10, Christiania, 1892.

NEWS AND MISCELLANY.

Prescuted on an account of a Postal Card.

Dr. James E. Reeves formerly of Wheeling, now of Chattanooga has been sued for damages on account of the following postal card, written to Dr. Mettner of Cincinnati:

CHATTANOOGA, AUG. 14, 1893.

My Dear Doctor:

I have seen your name in Amick's pamphlet. Please give me the outcome of your experience with the so-called "chemical treatment" for consumption. The enterprising managers have within the last month made Chattanooga a sort of head-center for sending out in the secular press wonderful cures which are pure fabrications. Not a particle of proof can be furnished that a case of tubercular consumption has been cured, or benefited by the so-called treatment. Has Cincinnati sold out and moved to Chattanooga? Verily, it seemes so. Speak your mind fully to me.

Sincerly yours, JAMES E. REEVES.

Dr. Reeves is full of fight, and says he will expose the whole thing in court next October with great pleasure.

THE MEDICAL AND SURGICAL REPORTER.

No. 1909. PHILADELPHIA, SEPTEMBER 30, 1893. Vol. LXIX—No. 14

ORIGINAL ARTICLES.

SURGERY OF TUBAL PREGNANCY.*

JOSEPH PRICE, A. M., M. D., Philadelphia.

As we look back across the years we note that progress in some of the more important lines of medicine and surgery has not been rapid, that many of the simplest surgical procedures, those of inestimable value to the profession and to suffering patients, have been of comparatively recent devisement and practice. The steps are slow that grafts most that is best into our every science and art. We put to the severest tests of science and experience every product or result of the highest genius. We are not satisfied until we have tested and know values. But for all this our advances are not the less certain and reliable. Every innovation must confront prejudices, opposing arguments, stand the tests of many experiences, before it can be regarded as having come to stay. We prefer our roads should be made for us and be well traveled before we take to them. We throw ourselves upon the resources of our science and art as we find them and find that to master them is the best equipment for our work. We are averse to wasting time in the discovery or invention of new methods. We are rather impatient with the "my method" gentlemen of the profession. In making choice of a watch we prefer the Geneva to the Waterbury. In surgery our choice of methods is equally easy, the guiding is that of a principle equally rational—it is to prefer the simple, direct, accurate and successful in result, the method employing a minimum of manipulation.

We are not so eager for the invention of something new as we are for the wisdom to use what we have at hand, to so improve and adapt our methods to our varied needs as to carry order where confusion now exists. Do not understand, that we object to the new, to innovations; we would not fix a limit to our resources. We want investigation, research and invention to have free wing, but we can only gain more and better by using wisely and energetically what we have. We want enough interest in the "ways and means" at our command to take all professional drowsiness out of us. It is as a means to something better that we believe in the old. The old is good only as it can be used to evolve something better. We have no sympathy with modern conservatism as exhibited in medicine and surgery. It is the spirit of delay, of postponement, and regards all changes as deterioration. It conserves the old because it is old—because that is the way the old Beacon street or Knickerbocker dad did it. It never has a new day—spends all its time living over yesterdays. We are not feeding on old reputations, resting by old landmarks, we would mark some growths of our own. I desire for the profession of the period some triumphs. From an operative standpoint I consider the success of surgical interference in tubal pregnancy as one of the most prominent innovations marking the progress of modern surgery.

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*Read before Western Association Obstetricians and Gynecologists, 1892.

Early in the history of all surgery it is difficult to establish a procedure—perfecting the surgery of any particular operation is easy and simple as compared with the educational effort needed to establish it. As yet some procedures or operations largely practiced by eminently successful operators are questioned by the so-called conservatives.

I would urge the opinion that tubal pregnancy is a grave, perilous trouble from the very instant of its inception, and from the instant of its first recognition there should be no suspension of the vigil over it. These cases burden every physician into whose hands they fall with untold anxieties and doubts. Consultations for suspected intra-uterine pregnancy are quite common in those peculiar cases of much-attenuated uterine walls in normal gestation, but the ectopic cases are permitted to pass through the primary rupture, recurring ruptures, almost constant pain and spurious labor, entailing impaired general health, without even a suspicion of the patient's peril. Some ten cases in my own experience have had this history. Tubal pregnancy is dangerous throughout its existence. The subject is never safe until surgically relieved, and the time for this relief is when the trouble is first recognized.

Exceptionally—if *ever*, is the trouble recognized before rupture. The few cases recorded have all been by men with one experience, with very little knowledge of the murderous troubles found in the pelvis. A few surgeons, with an experience of nearly one hundred sections for ruptured tubal pregnancy, have never found one unruptured. Dr. Berry Hart, who has given the subject very patient and studied investigation and who discusses it from a high surgical standpoint, is worth quoting here: "As all know, the Fallopian tube is in the vast majority of instances the starting point of extra-uterine gestation; the most common result of this is that rupture occurs, usually at the second month, through some part of the tube covered by peritoneum, a result almost universally fatal if left alone, and as invariably curable if operated on in time by abdominal section." An element of the history connected with these cases is that few of them are kept under observation with the definite purpose of removing the viable child at the period of spurious labor—but few are recognized at that time; alarming symptoms develop and subside, and consultation with a specialist, if he is at any time consulted, follows the death of the child, it rarely antedates it. Then all the condtions are found greatly aggravated by delay or neglect, or that which is infinitely worse, than either or both, inexcusable ignorance. The occurrence of ectopic pregnancy is regarded in widely different lights by the theorist, and by the surgeon who has learned to deal with it practically and who has accordingly come to understand the manifold directions in which speedy disaster may troop down upon unfortunate women subjected to this calamity. The argument that many cases get well of themselves, in the presence of the multitude of disasters and in the light of the horror of some of these very recoveries, is so puerile that the surgeon of practical and positive bent cannot regard them with complacency, nor consider that those who advance them have authority from which to speak more positive than the vaporings of fancy.

To explain the reasons for this apparently rather rude statement the following *causes of death* maybe enumerated:

Hemorrhage, Peritonitis, Septicæmia, Perforation of important viscera by bone.

For rupture of the sac in the early stages little or nothing was done till recent times. Baneham, of Virginia, did two operations, one 1790 and the other 1799, both successful. There was a lapse of one half-century before the procedure.

In 1849, Dr. Harbert, an American surgeon, first suggested operative treatment for this terrible accident; but little attention was paid to his proposal till 1866 and 1867, when Dr. Stephen Rogers, of New York, wrote and urged operation. No headway was made, however, until Tait, in recent years, took it up and by a remarkable series of successes placed it at the front of major life-saving procedures.

I can only allude briefly in discussing this subject to the more important points still under discussion; those not yet settled to the satisfaction of many by the logic of experience and result. I am convinced by my own surgical experience that ectopic pregnancies are always tubal—that they rupture and end in some variety of intra-peritoneal mischief. The embryo escapes at the first rupture and is either found or lost by digestion. Recurring hæmorrhages are common; the placenta and its traces are irremovable. I have removed a large number of fetuses, from eight to ten weeks old, dead, macerated, and largely digested, with a well-developed placenta living and growing, the growing going on long after the death of the fetus. Mr. Tait alludes to over eighty cases of intraperitoneal hæmatocele, and in every one of them the cause was ruptured tubal pregnancy. With an experience of eighty-three sections for ectopic pregnancy I remain in surgical ignorance of extra-peritoneal hæmatocele, not a single case did I encounter. Speaking purely from my own experience I am driven to say that there is no such a thing as a pelvic hæmatocele, except those produced by ruptured tubal pregnancy. I may be classed as an enthusiast for operation, but I always find large quantities of blood and clot in the peritoneal cavity and commonly a fetus. The answer as to the proper time for surgical interference is, when you are sure rupture has taken place and hemorrhage is going on; when the symptoms are sufficiently marked and positive to justify the specialist or general practitioner in opening the abdomen for relief from such a calamity. The diagnosis should not be uncertain; the physician should be familiar with the characteristic symptoms; if not familiar he will be impressed by their precise nature, so rare is it that he has an opportunity of contending with such marked symptoms. They may be summarized as—history of pregnancy; one or more periods absent; agonizing pain; patient becomes faint and blanched, and manifests peculiar mental disturbance; symptoms of concealed hæmorrhage, and common sense would suggest at once the staying of the hæmorrhage by seeking the offending vessel. Taking time to consider the case in all its varied aspects, waiting on later developments, commonly results in needless delay and loss of the patient. Precise diagnosis is not important in the presence of a pelvic or abdominal tumor behaving badly and destroying your patient. I insist upon primary operation in all cases. The dangers of non-interference, primary and secondary, are too great and well-known for us to withold our hands. Recurring hæmorrhages, sepsis, peritonitis and exhaustion do occur in all cases of delay.

Probably the most puzzling and difficult question to settle, where interference is required, is that of dealing with the placenta. When detached, or easily detachable without much hemorrhage, it should be removed. This has been done frequently with success, yet cases have been lost through attempts to peal off the placenta. There are yet other methods of procedure—one to leave the placenta and drain the sac; another to cut off the cord, leave the placenta and close the sac. Hemorrhage may occur in either procedure, and also when the placenta is not removed. In all cases the risks of bleeding are considerable. Hemorrhage though has been rendered less alarming and fatal by our better methods of suppressing it—firm sponge or gauze packs, the use of heat or solution of iron. I will add here that iron will favor fecal fistula and tedious convalescence. Ligatures and forceps cannot be used about viscera with safety, drainage with pressure will be the safest and surest. I am contrained to conclude from my own clinical experience that the old and non-surgical rule of leaving the placenta to slough away is too dangerous and prolonged to be practiced. The placenta should be removed in every case, or washed and hermetically sealed, thus favoring its healthy digestion and avoiding gangrenous suppuration and detachment.

Good surgery must settle the few remaining points. Secondary rupture of broad ligament, discharge of placenta and fresh adhesions, or the second implantation or grafting of the placenta, have never occurred in my experience; nor have I any knowledge of such cases except that conveyed through the literature of the subject, where they appear in large numbers. In the matter of methods, such cases are not of the kind in which you can indulge in indecision; they will brook no delay in your determining what to do and how you will do it. If there be present a bulky placenta, living and growing, either before or after the death of the fetus, the choice of one of two methods must be made and practiced with rapidity and courage—cleansing and hermetically sealing the placenta and abdomen, trusting to absorption, or secondary operation for its removal in the event of its behaving badly. The removal of a growing and about universally attached placenta is one of the most startling and difficult procedures in surgery; it taxes the highest courage. The hemorrhage is profuse and alarming, and sometimes uncontrollable; the contraction of all tissues to which it is attached simulates very much that of uterine tissue. Rapid separation, heat and firm pressure will commonly succeed in controlling it. As to the choice of time for operation, after a careful study of the history, surgical procedure and results in the recorded cases, united with my own experience, I am strong in the conviction that there is but one safe choice, and that is prompt removal when the accident is first recognized. Delays at any period of ectopic pregnancy are dangerous.

I scarcely think it is wise to risk the mother's life for a living child by waiting for viability. Here comes in a very important question—one upon which there is a wide difference of opinion. From the standpoint from which I view the matter, the mothers life should be paramount, the child's a secondary consideration. I will not assume to discuss the question from an ethical standpoint, but confine myself to cold surgery and to results—to the matter as it relates to the mother personally and involves her relations to her family and to society. Happy, if preserved life be the fortune of both, but if there must be a loss and a saving of one I would have the saving that of the mother's.

Whatever the verdict may be ultimately as to the time of operating, the method and site for incision seem to be fixed. The method of evacuating the liquor amnii has been followed by such doubtful and calamitous results that it is now practically abandoned. The vaginal method of extirpation of the sac is also now almost universally condemned and can only be thought of in the rarest possible conditions. I can do no better than to quote Dr. Herman's conclusions, which are as follows:

1. The operation of opening an extra-uterine gestation sac by the vagina early in pregnancy, before rupture has taken place, by the cautery, knife or otherwise, is a dangerous and unscientific procedure. Abdominal section ought always to be preferred to this.

2. Soon after rupture has taken place, when interference is called for to arrest hemorrhage, abdominal section is more liable to succeed than vaginal.

3. When rupture has taken place, and the effusion of blood is followed by pyrexia, the indications for incision of vagina are the same as those in hematocele from any other cause.

4. At, or soon after full term, before suppuration has taken place, there may be conditions which indicate delivery by the vagina as preferable to abdominal section. These are—

5. When the fetus is presenting with the head, breach, or feet so that it can be extracted without altering its condition.

6. When it is quite certain, from the thinness of the structures separating the presenting part from the vaginal canal, that the placenta is not implanted on this side of the sac, and it is not certain that the placanta is not implanted on the anterior abdominal wall.

7. If the child cannot be delivered by the vagina without being turned abdominal section should be performed.

The statistics in these cases are interesting and valuable. Their chief lessons are the perils to life and the importance of prompt surgical interference. The eminence of Mr. Martin, of Berlin, gives the weight of high authority to his observations. He reported the results of his observations in 56 cases of ectopic gestation, at the recent International Congress at Brussels. We extract from a synopsis of this report published in the *American Journal of Medical Sciences*; "Most cases of ectopic pregnancy terminated in tubal abortion within the first three months. Martin's table shows that 15 terminated in the first month, 13 in the second, 11 in the third, 7 in the fourth, the remainder occurring before the ninth month. The fœtus attained viability but once in his cases. The interruption of ectopic pregnancy usually occurs from failure in the physiological conditions existing between the ovum and the cavity containing it. The pain which occurs at tubal abortion is caused by the passage of blood through the tube. The newly developed blood vessels burst, while the strongly developed muscular layer of the tube is not ruptured. Thus many cases result in spontaneous recovery. Convalescence, however, is prolonged, and there is danger of death from shock, hemorrhage, and the development of septic infection. Localized pelvic peritonitis is also common. Martin quotes Schauta's collection of 241 cases in which the ovum was not removed by operation. Of these, 128 ruptured into the abdominal cavity with bleeding; in 22, a hæmatocele formed with peritonitis. In 34, rupture occurred into the intestine; in 9, into the bladder; in 5, the abdominal wall was perforated; in 4, the vagina was entered; in 6, the ovum escaped through the uterus; in 4 cases it became incarcerated with ileus; and in 9 cases lithopædion was formed without especial annoyance to the patient. He had personally observed 5 cases in which rupture occurred, which were not treated by operation; all of them perished. The symptoms of ectopic gestation embrace some of those of normal pregnancy, early in the case, symptoms of peritoneal irritation predominate. Menstruation is disordered, hemorrhage finally ensues; during the first three months, a probable diagnosis can be made. A positive diagnosis of rupture is made by pain and collapse with profound anæmia. The child is usually not considered in the question of prognosis or operation; the prognosis for the mother, when the cases proceeded without operative interference, he found to be 68.8 per cent. mortality and 31.2 per cent. recovery. In 585 cases in which operation was performed, 76.6 per cent. recovered and 23 per cent. perished. Martin had enlarged Schauta's table and found that in 265 cases treated expectantly, 36.9 per cent. recovered, and in 515 cases operated upon. 76.7 per cent. recovered. His belief is that operation is invariably indicated. The morphine treatment of Winckel is not indorsed, nor the treatment by electricity; the ovum should be completely removed; when the fœtal sac cannot be completely extirpated, it may be stitched to the abdominal wall or punctured and drained through the vagina."

It would be very difficult to find statistics of many of these "spontaneous recoveries to which Dr. Martin refers—nor is there anything in the experience of Mr. Tait, myself and others to fortify a faith in these miraculous recoveries. Dr. Martin's own statistics and his strong statements as to the fatality of these cases, where not early interfered with, goes to disprove many such recoveries. It is admitted that even where spontaneous recovery does occur, convalescence is prolonged and there is danger of death from shock, hemorrhage and the development of septic infection. Localized pelvic peritonitis is also common. . These facts leave little room for the frequent occurrence of such recoveries.

Summary of Cases (not including my own):

247 operative cases—		
206 recoveries		—82.75 per cent.
41 deaths		—17.25 "
132 palliative and expectant cases—		
62 recovered		—49.97 per cent.
70 died		—50.03 "
102 cases—		
21 no operation; no treatment; fetus *quiescent* throughout life		—20.58 per cent.
112 cases—		
Section operation	112	
Expectant treatment	0	
186 cases—		
Section operation	119	
Expectant treatment	67	
102 cases—		
Section operation	16	
Expectant treatment	65	
No treatment	21	
400 cases—		
Section operation	247,	— 61.75 per cent.
Expectant treatment	132,	— 33. "
No treatment; quiescent	21,	— 5.25 "
My own Cases:		
83 cases—		
Recoveries	80,	— 96.39 per cent.
Deaths	3,	— 3.61 "
These added to other operative cases:		
326 operative cases—		
Recoveries	282,	— 86.51 per cent.
Deaths	44,	— 13.49 "

ALL ONE TO CABBY.—It must be trying to a great personage to have his claims to distinction all unknown; but, however trying the situation, he had best be cautious about attempting to set it right. A Scottish gentleman learned this by experience.

He had a dispute with a London cabman over an eighteenpenny fare. He had offered a shilling only, and the cabman had remonstrated with him.

Drawing himself up with dignity, he said,—

"Eh, mon, but I think ye dinna ken whom ye're speaking to! I'm the MacIntosh!"

The cockney was not properly impressed: he retorted sharply,—

"I don't care if your the Humberella: I mean to have that sixpense!"—*Youth's Companion.*

CLINICAL LECTURES.

CORRECTION OF SYPHILITIC DEFORMITY OF NOSE; SYPHILITIC STENOSIS OF LARYNX; AMPUTATION OF LEG ON ACCOUNT OF COMPOUND DISLOCATION OF ANKLE; TORTICOLLIS COLLAR; REMOVAL OF BREAST FOR CANCER.

ROSWELL PARK, A. M., M. D., BUFFALO. N. Y.

Here is a lad upon whom I operated last week. The operation was an experiment, proposed and accepted as such, with the hope of relieving a deformity which goes by no particular name but which consists in an absence of the bridge of the nose. This deformity is usually the result of hereditary syphilis and I presume that it is in the present instance, though the history and other confirmatory evidence is lacking. The boy works in an architect's office and has imbibed ideas of symmetry which have led him to seek an improvement of the shape of his nose. The operation consisted in making a small longitudinal incision on each side of the nose and separating, by means of a small chisel, the nasal bones from the nasal processes of the superior maxillary bones. The nasal bones were then pried upward and forward and held in place by a hare-lip pin, after drilling both bones and the nasal septum which, at this level, is the vertical plate of the ethmoid. Lead plates prevented the hare-lip pin from slipping inside the nose. The plates and pin will not be removed for a few days yet. The operation amounts to producing a compound fracture, and time must be allowed for the formation and organization of the blood clot so as to afford a firm foundation for the displaced bones. The patient expresses himself as satisfied with the result and you can see that his nose has a very good shape.

This patient illustrates the evil results of tertiary syphilis when treatment is not properly persisted in. Two or three years ago, he was treated in this hospital during the secondary stage of the disease but left before he was sufficiently medicated and returned later for treatment in the tertiary stage. There is scarcely an area on his body as large as the palm of the hand, where there is not the scar of a syphilide which has previously ulcerated. Last winter he developed a syphilitic laryngitis which became more and more chronic and proliferative, and one night the obstruction increased so rapidly that I was called by telephone about midnight to do tracheotomy. The emergency was so great that I believe a delay of five minutes would have resulted in the man's death. He is a very good patient in the hospital and obeys directions implicitly, but when he goes out he neglects to take his medicine and report for observation and he has paid dearly the penalty for his carelessness. He wore the trachea tube for so long a time that the larynx filled up completely with fibrous tissue, and he was unable to speak even in a whisper although he could form the words with his lips and blow through the trachea tube. Only those who were familiar with him could understand what he tried to say, and he oftened had to resort to writing to make himself understood. Some time ago I divided the thyroid cartilage in front and succeeded in reaming out the laryngeal passage. It was not so easy to keep the passage clear on account of the tendency to proliferative granulation and cicatricial contraction. The operation, therefore, was repeated in your presence. By removing some of the tissues and dividing others, I finally made an opening into which I could insert a tube, but I did not want to remove the trachea tube for fear that he might need to breath through it again. I therefore had a hole cut in the convexity of the trachea tube through which a smaller tube was slipped upward to communicate with the pharynx. He thus has an improvised artificial larynx through which he can breath and which allows the use of the lower tracheal opening if, through any accident, the upper passage should become clogged. He wears a cork in the trachea tube and is satisfied to talk in a whisper. At considerable expense, an artificial larynx could be made with a vibrating reed to imitate the sound of the vocal cords. But the patient can not go to the necessary expense and it is by no means advisable that he should. I had one patient who discarded an elaborate artifical larynx because the monotonous and metallic sound of the reed made him too conspicuous and he thought it preferable to speak in a whisper.

Five or six weeks ago, a German, aged forty-five, slipped in getting off a street car and sustained a compound dislocation of the right ankle with a little chipping of the end of the fibula so that the external lateral ligament was loosened. He was taken to the Fitch Accident Hospital and treated expectantly, the part being kept immersed in a hot antiseptic solution. The idea was to afford an opportunity for recovery without the loss of the foot but with a stiff ankle. The case, however, has not done as well as might have been expected, sloughing has occurred and the joint surface is widely exposed. The case calls for some interference, possibly an atypical resection, perhaps a removal of the astragalus and the diseased soft parts ; possibly amputation will seem advisable. The patient is a poor laboring man whose time is his only bank account. If I resect the joint, it will be at least six months before he can use the foot, while after amputation he can be about in a few weeks. I have presented the alternative to him with considerable hesitation, because the foot looks as if it might be saved if ample time were allowed. Still the patient understands that he can have a useful artificial foot attached to the stump, so that he will be practically as well off as if resection were successfully performed. I begin the operation, therefore, with the full consent of the patient to resect or amputate as seems better, not with the injunction so frequently given, to save the member at any sacrifice of time or expense.

On examination the tissues are soft and grumous, there is much infiltration about the sloughing surface and I remember that after the injury there was a cellulitis extending up the leg. I shall, therefore, amputate. The line selected is four inches above the malleoli and I will use the circular method. It will not be wise to close the tissues of the stump as closely as in the amputations which you saw last week, for there is still some bogginess left from the cellulitis and I should feel safer to leave provision for drainage.

This is the little boy upon whom I did a tenotomy of the sterno-cleido-mastoid for torticollis. Although the obstacle to the natural position of the neck has been removed, the faulty habit remains and something is necessary to straighten the neck. If the child were to go among intelligent people, a series of exercises could be directed for this purpose, but he is leaving the hospital for associations in which we cannot rely upon help from others and some mechanical aid is necessary. I have therefore devised this plaster-of-Paris collar which is held in place partly by bandages partly by its own weight. It is not as elegant in appearance as a collar made of steel and leather, but it is inexpensive, the raw material costing perhaps five cents, and it will answer the purpose perfectly. It is made heavy and strong, for we do not expect to see the boy again for two or three weeks and I want the collar to be practically unbreakable.

The patient for whom we have been waiting, is a woman of sixty-seven who looks seventy-five. She belongs to that social class which has nothing before it but work, and she is thin and worn but still perfectly well so far as general health is concerned, and rugged. Five months ago she fell on the handle of a parasol and bruised her side and soon after, a lump appeared in the left breast, which has steadily augmented in size and has become more and more adherent to the overlying skin, until it is now firmly attached to it and the skin is reddened but without tenderness or heat or other sign of inflammation. Only by firm pressure can I cause any sense of discomfort in the tumor. The history and absence of local signs enable us to exclude acute inflammation. If this were an abscess, there would be the history of previous inflammation and there would now be fluctuation, which can not be detected. The mass is certainly a neoplasm in every sense of the word; but is it benign or malignant? The woman is at an age when such benign tumors of the breast—never very common—are quite rare and when malignant tumors are frequently found. There is close adhesion with the skin, whereas a benign tumor would simply push the skin before it. The nipple is not retracted. One sign of malignant disease is lacking,—the enlargement of the lymph nodes in the axilla, but they may be slightly involved without being palpable through the skin. There is but one indication for treatment, the removal of the breast. Its functional activity ceased more than twenty years ago, and there can be only the vestiges of glandular tissue left. It is on this account that retraction of the nipple is not manifest. The great differences in the apparent size of mammary glands are due to the accompanying connective tissue and fat. Except in the matter of age, we are taking this case at a favorable time, for the lymphatics are little if at all involved.

I make the lower incision first so that the blood will not obscure the field of operation. You will notice that I include the nipple for, although the tumor does not appear to involve it, common sense dictates that all the glandular tissue in which the disease originated should be removed. Having taken out the breast, our next duty is to clean out the lymph-nodes in the axilla. Even if they are not enlarged, it is now held to be the only proper course to remove them for the purpose of future security. I consider that on the thoroughness of this part of the operation depends the exemption from a renewal of the disease in her case. Here is an enlarged lymph node which could not be felt through the skin. It shows how necessary it is to include the axilla in the field of operation in every case. The next step in the operation is the tying of the vessels which have been cut, among them the long thoracic artery. The wound is then sprayed with hydrogen peroxid solution. You will notice that the only part of the wound in which there is any chance for retention of fluids, is high in the axilla and I will insert a decalcified bone drainage tube here which will serve as a conduit for twenty-four or thirty-six hours, and will then collapse and be absorbed later. In making the counter-opening for this tube, I have tried to avoid the latissimus dorsi, but have been obliged to pierce it. The wound is now closed with cat-gut and covered with iodoform and antiseptic gauze. It is important to keep the arm absolutely still. I, therefore, apply a pad of cotton over the ordinary dressing, flex the fore-arm across the chest and bind the arm to the body by the triangular application of the roller bandage.

HE GOT THE WHISK.—Mr.——had a new office clerk, who was recommended to him by the ladies of the W. C. T. U. for his strict temperance principles, which were exactly in accord with those of Mr.——himself.

"Peters," said Mr.——to the new man yesterday morning, "take some money from the drawer and go out and buy me a whisk."

"Trimmed or plain, sir?" asked Peters, with a glad, joyous look in his eyes.

"Plain, of course; the plainer the better; something solid and substantial."

Peters was gone about half an hour. When he returned he carried a big, thick tumbler in his hand full of a dark red liquid. His voice sounded as if he had caught cold.

"Here's your whisk," said Peters,, setting the decoction down suddenly in front of Mr.——.

"Good heavens, man, what is this?"

"Whisk, whisk, that's what," said Peters, mysteriously.

"But I wanted a whisk-broom."

"Why didn't sha sho? Thought it was 'breviation for whiskey. Nemmer mind, it won't be wasted." And he swallowed it on the spot.

Peters is again looking for a place. —*Detroit Free Press.*

MA'S SHOE-STRINGS.—Susie's mother sent her to the shoe-store the other day for some shoe-strings. The little girl tipped the door-latch and slowly walked up to the proprietor.

"Mamma sent me down for a pair of shoe-strings," and Susie fingered her money nervously as she looked into the dealer's face. The latter turned to a bunch of strings upon the wall and began to pull a couple out. Then he stopped.

"How long does she want them?"

Susie looked flustered. "I don't know, but I think mamma wants them to keep." —*The Wasp.*

A PRECARIOUS EXISTENCE.—He—"No, the boss doesn't pay me more than I'm worth."

She.—"How in the world do you manage to live on it?"—*Lippincotts.*

COMMUNICATIONS.

CONTRIBUTIONS TO THE STATISTICS OF RENAL SURGERY.*

DR. JAMES ISRAEL.

By primary nephrectomy the author understands the immediate removal of the kidney during the first operation; by secondary, the removal of the kidney on which nephrotomy had previously been tried. He places stress upon the high mortality of the secondary, in comparison to primary nephrectomy: three cases out of four were lost where secondary nephrectomy was done. One death was due to iodoform poisoning; in the other two cases the primary operation would undoubtedly have given better results. One of these cases suffered from pyonephrosis, for which nephrotomy had been performed seventeen months before, leaving a fistulous tract to the kidney; the urine was clear at first, but gradually retention pockets formed in the operated kidney, which persistently returned in spite of the dilatation of the fistula; and fourteen months after, a swelling of the other kidney could be demonstrated. Uræmic attacks followed so that seventeen months after the nephrotomy, nephrectomy became necessary; the patient died eight days after the operation. The specimen showed extreme lipomatous changes, leaving only slight traces of kidney substance, the ureter was also surrounded by masses of fatty tissue. The third patient succumbed on account of extensive pathological changes in the other kidney.

The author advises, from the experience of these cases, primary extirpation of the kidney, even where the other be slightly diseased, as the patient has more chances for entire recovery.

He proposes, if the operation is necessary on one kidney, to do the primary operation, even if the disease has attacked both kidneys.

In suppurating processes of the kidney, he also advises prompt and primary nephrectomy; should the kidney be filled with abscesses leaving but small portions of its parenchyma, so necessary for the uses of the human economy, it has been deemed proper to leave that parenchyma, so far as possible, intact, until satisfied as to the condition of the other kidney.

If primary nephrotomy has been made and, at a later date, it is demonstrated that the second kidney is normal, it is necessary to perform nephrectomy of the first as quickly as possible.

The study of the condition of the second kidney is, in spite of various methods given, often very difficult. The author proposes in certain cases, to ligate the ureter of the affected kidney, which will give a certain amount of information as to the condition of the second.

The author presents, in a critical manner, the results of his renal operations. In those operations classed as primary, death occurred thrice. One patient, a female, was 56 years old, with a carcinoma of the right kidney. The first symptoms were noticed ten years before consultation; the left kidney seemed normal. The operation was easy and rapid, but death resulted in forty hours from vomiting and meteorism. The autopsy proved a normal condition about the wound; there was brown atrophy of the heart; in the left kidney a slight parenchymatous cloudiness could be detected. In a fatal case of nephro-lithotomy, the same condition was found. The author makes the important statement that no chemical solutions, iodoform, sublimate, etc., had been used. It was thought that possibly chloroform narcosis of long duration may have acted upon the kidneys.

In seventeen operations without complications, fourteen cases presented a slight affection of the remaining kidney, as albumen, hyaline and cylindrical casts and red blood corpuscles, etc., had been found in the urine. The same condition was found in a nephrectomy of some standing, and in a narcosis of long duration. In the third case of nephro-lithotomy, death was caused by septic inflammation of the operated kidney produced by the patient having frequently torn the drain out of the wound.

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* Read before the Freie Vereinigung der Chirug., Berlin, 1893, and translated by M. B. Werner, M. D.

In this patient the author saw for the first time a reflex aneuria. The patient suffered for a long time from renal colic of the left side and the left kidney was enlarged and painful. These attacks of pain were often eased by sudden palpation of the kidney and the secretion of urine was immediately reinstated, and, since the right kidney seemed healthy, there appeared to be but one explanation, that of reflex aneuria. A longitudinal incision into the pelvis of the kidney demonstrated the presence of a stone (removed) which had acted, for six days, as a check valve to the ureter. Closure of the renal pelvis could be done only on the lower four-fifths; above, the capsule of fat was drawn together and sewed fast; almost immediately after the operation urine passed through the bladder and wound; after two days all the urine passed through the bladder. This was proved by endoscopic examination when directed towards the right ureter.

The production of a reflex aneuria is illustrated in the following case: A man suffered for years from an intermittent hydro-nephrosis with consequent attacks of hæmaturia; pressure by the distended cavity acted as a dam to the secretions of the healthy kidney. Puncture of the sac reinstated the flow of urine.

Another case also is explained as a reflex aneuria. In this particular patient the right kidney had been extirpated for hydronephrosis, the wound sewed and a drain inserted. The result was normal up until the sixth day, when the secretion suddenly became scant and marked pain could be traced to the location of the extirpated kidney. Considering that a portion of the drain caused pain at the stump, the drain was removed and at once there was an increase of urine and a disappearance of pain. Microscopically the urine contained a large quantity of microliths, formed probably from a central epithelial cell with an onion like covering. In the extirpated kidney small microliths of similar character could be found.

The last fatal case the author has had up to date, was a woman suffering from painful right-sided renal colic, in whom, though palpation was negative, incision was considered necessary for diagnosis. There was nothing found abnormal; the rather large wound of the kidney was closed by deep and superficial catgut sutures, and a compress bandage ended the operation. Soon after the operation, vomiting set in, tympanites and increased pulse. On the second day the bandage was taken off; the fifth day colotomy was performed but without success. The autopsy revealed a small intestine greatly distended; in the large intestine, a stagnating fecal accumulation; beneath this a contracted portion with slight bloody effusions; there was a similar condition found at the colon transversent in the region of the right flexura. The author expresses his opinion that the unfortunate result was probably due to the decided compression of the bandage, which had produced irritation of the nerves of the intestines. He has, therefore, returned to the belief that renal bleeding can be controlled by manual compression, after the closure of the wound by deep catgut sutures. As a proof he mentions one case in which the kidney had been completely cut in half, the bleeding being arrested later on by several deep, and a few superficial catgut sutures.

OPERATIONS.	No. of cases.	Deaths resulting from operation.	Percentage
Primary Nephrectomy	29	3	10.3 per ct.
Secondary Nephrectomy	4	3	75 per ct.
Nephrotomy	11	1	9 per ct.
Opening down to the entire ureter and Pyelotomy	1	0	0 per ct.
Nephro-lithotomy	5	2	40 per ct.
Nephrorhaphy	3	0	0 per ct.
Exploratory abdominal incision down and into the kidney reaching the pelvis	4	1	25 per ct.
Puncture of the capsule Propia.....	1	0	0 per ct.
Drainage by Puncture	2	0	0 per ct.
Exploratory incision of the kidney with shelling it from its capsule fat	3	0	0 per ct.
Closure of a fistula from the kidney by operative means	1	0	0 per ct.
Incision for Perinephritis...........	7	0	0 per ct.
Total	71	10	14 per ct.
Of 33 Nephrectomies there were			
Malignant tumors	12	2	16.6 per ct.
Syphilis	2	0	0 per ct.
Tuberculosis	2	0	0 per ct.
Hydro pyonephrosis, abscess of the kidney	17	4	23.5 per ct.
Total	33	6	18 per ct.
Of these Primary extirpations......	13	1	7.6 per ct.
Secondary extirpations	4	3	75 per ct.

HEART-DISEASE OR KIDNEY DISEASE?*

JAMES TYSON, M. D.†

I have myself so often been mistaken in the first conception formed of the relation between a combination of symptoms for which heart or kidney may be responsible, and have so frequently had occasion to share the difficulty with others, that I have been forced to give the matter some thought; and it seemed to me that so practical and important a subject might also be interesting to the members of this Society.

The difficulties met under these circumstances will, I think, be better appreciated by the brief story of four or five illustrative cases:

CASE I.—O. E., a shop-girl, aged fourteen, was admitted to the Hospital of the University of Pennsylvania, October 31, 1892.

Her mother is said to have heart-disease, but the family history is otherwise negative. The patient herself had measles in childhood, but, with this exception, reported no illness until that for which she sought admission. This set in apparently only three weeks previously, when she noted that her legs were swollen. Shortly after this she became short of breath. She continued, however, to perform the duties of her position up to the time of her admission to the hospital.

On admission, her appearance was most striking. A lustrous pallor pervaded her entire body—in fact, she presented the characteristic waxy hue of chronic renal disease. Her feet and legs were much swollen, as were also the right hand and face. To a less degree she was everywhere edematous, though more so on the right side, on which she mostly lay. The urine was dark-hued, had a specific gravity of 1030, was loaded with albumin, and contained numerous granular casts.

My colleagues, as well as myself, all said a "typical case of renal disease." The urine examination seemed scarcely necessary. The diagnosis could be made at a glance. As a matter of course, however, her heart was also examined. The apex-beat in the fifth interspace was forcible and rapid, from 108 to 120, while the respirations numbered from 40 to 43 in the minute. On palpation, a cardiac thrill, systolic in time, could, in addition, be appreciated.

Percussion determined the upper border of cardiac dullness to the left of the sternum, at the superior edge of the third costal cartilage; the right border one inch to the right of the right margin of the sternum, There was, therefore, enlargement of the right side of the heart, as well as of the left. There were the signs of pleuritic effusion on both sides. Auscultation recognized a double murmur, most intense at the apex, with the systolic portion conducted into the axilla.

Here was a case of mitral disease—regurgitation and probably stenosis with right-sided dilatation; but the intense waxy appearance and the pronounced albuminuria led us to believe that there was also positive renal disease, probably subacute parenchymatous nephritis.

The girl was ordered absolute rest in bed, five minims of tincture of digitalis three times a day, and caffein citrate three grains every four hours. Copious diuresis set in, and at the end of five days the dropsy was almost totally gone. The scanty urine had increased until it had reached 62 ounces, while the albumin and the casts had entirely disappeared. The change was almost incredible. I had never seen such a striking one in so short a time. The mitral murmur continued showing that the heart disease was the permanent one, and the idea, almost irresistible at first, that there was some special form of renal disease, independent of the passive congestion due to the cardiac disease, was dissipated.

She remained in the hospital until December 24. Once there was a return of the albumin and a few granular casts, concurrent with an attack of bronchitis, but these again disappeared, and she was discharged seemingly quite well. The diastolic part of the double mitral murmur finally also disappeared, and the heart had been restored to its original dimensions, but the mitral systolic murmur continued, and is likely to be permanent.

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* Read before the Pennsylvania State Medical Society, 1893.

† Professor of Clinical Medicine in the University of Pennsylvania, etc.

Case II.—F. R. P., a bank-officer, aged forty-two, was seen in consultation with Dr. S. R. Crothers, of Chester, Pennsylvania, on November 19, 1892. With the exception of typhoid fever, ten years before, and an attack of influenza in December, 1891, he had never been seriously ill. About one year previously to his visit to me, he first began to have attacks of palpitation of the heart and shortness of breath, with headache. He was treated for "functional trouble," and improved sufficiently to return to work. In this, however, he overtaxed himself, and at the end of about two months he was again compelled to give up. Although he spent much of the summer at the seaside, there was not improvement sufficient to permit his return to business. All of this time his symptoms pointed to heart disease, and his own belief and that of his family were that this was his principal, if not his sole illness.

At the date of his visit to me there were aggravated dyspnea and cough, but the headache, from which he had before suffered so much, had disappeared. There was also nausea, especially in the morning, but at times also early in the day, associated occasionally with diarrhœa. His complexion was intensely shallow — almost cachectic.

On inquiry I found that his feet were a little swollen at night, but that this swelling disappeared each morning. Examination of his heart disclosed enormous hypertrophy of the left ventricle, the apex being lowered and displaced to the left. The aortic second sound was accentuated, but there was *no murmur*. The action of the heart was tumultuous, its rate frequent, its rhythm gone.

The urine throughout has been copious, light-hued, and low in specific gravity, until a short time before his visit, when it had become scanty and high-colored; but at the time of his visit, through the action of diluents and diuretics, it was increased to 64 ounces in the twenty-four hours. A portion of this examined by me had a specific gravity of 1012, and contained only one-twentieth per cent. of its bulk of albumin and a small number of hyaline casts.

In this case the prominent symptoms were cardiac, in contrast with Case I, in which the most striking symptoms pointed to the kidneys as their source, and in fact were at the time caused by renal complication. Yet the former was primarily a case of renal disease.

This is a state of affairs that supervenes on an interstitial nephritis, a gradual hypertrophy of the left ventricle, the rationale of which is not perfectly agreed upon, but which I am inclined to look upon as a compensatory hypertrophy, maintaining the individual in tolerably good health until compensation begins to fail, when the symptoms of cardiac distress described set in, and increase until death takes place, as in this case, suddenly, from simple cardiac failure, or, as is perhaps more frequent, from uremia.

In this instance, therefore, a case of primary renal disease was overshadowed by cardiac symptoms in so marked a degree as to cause the latter to be overlooked.

Case III.—A. G. B., a retired merchant, aged sixty-two, consulted me first on the 16th of April, 1892. He had a clear family history of gout, his father being gouty years before his death, and dying suddenly. The patient himself had been subject to attacks of gout for a number of years, and had cretaceous deposits in his knuckles. He had an attack of influenza in the early part of 1890, and another in May, 1891; but during the year previous to his consulting me, he had been more than usually exempt from gout.

Albuminura was discovered by Dr. Pepper in May, 1891. Following this the patient spent the summer in Europe. While in Europe the albumin disappeared, and continued absent until a few days before he consulted me, when its presence was discovered by his son, a medical man. He also noted at this time a little dyspnea on exertion, but with these exceptions felt as well as usual. His last evident attack of gout was on board ship, in the autumn, while returning from Europe.

At the time of his visit to me, in April, 1892, I examined his urine, morning and evening samples. Each contained one-tenth of its bulk of albumin, but I found no casts in either sample. The morning urine had a specific gravity of 1016; the evening, of 1014. I concluded promptly that I had to do with a case of chronic interstitial nephritis of gouty origin.

In June following his visit to me, the patient again went to Europe, and returned late in September, 1892. He had a couple of slight attacks of gout during his absence, and a little oppression in breathing on shipboard, so that he had to sit up in his berth. During the month of June there was some irregularity of action of his heart, which he ascribed to flatulence. With these exceptions, he considered his health even, better while in Europe, in the summer of 1892, than in the previous summer.

On November 21, 1892, he again consulted me. He complained of flatulence, and of what he termed wind pressing on his heart. This prevented him from lying down in comfort. He also thought that it caused cough. On the day before his visit he first noted a little swelling of his feet.

I now examined his urine again. It was darked-hued, contained one-tenth of its bulk of albumin, and this time I found a few hyaline casts. There was also a little swelling about his ankles, and auscultation disclosed an evident mitral systolic murmur. I prescribed rest at home (he had been attending to some business), salicylic acid, pepsin, and aromatic powder; for the flatulence, also hot water before meals; and for the dropsy, a pill containing digitalis, quinine, squill, and nux vomica. In a few days the edema had disappeared, and the dyspnea was partially relieved. A few days later both symptoms returned, and although again relieved for a time, they proved ultimately intractable. There was dulness to the right of the sternum. Evidently the right ventricle was yielding. The urine became more scanty, the albumin increased, as also did the cast, and the patient died suddenly December 20.

Case IV.—John W., a colored laborer, fifty-two years old, was admitted to the Hospital of the University of Pennsylvania, April 18, 1893. His family history was negative. He had had a bad attack of typhoid fever thirty-five years ago. Eight years, ago, while working in a brick-yard, he suddenly fell, and was unconscious for about four hours. With returning consciousness came unimpaired muscular power; but four years later he awoke one morning completely paralyzed on his left side, without any evidence of anything else happening in the night. At the end of three days, however, he began to regain power in the arm and leg of the affected side, and in three months was able to move around with the aid of a cane.

His condition in this respect has been improving steadily, but two years ago he noted that he was short of breath, and last winter this symptom grew worse, while edema of the legs was superadded. These symptoms finally became so aggravated that he entered the Philadelphia Hospital, whence, after six weeks, he was discharge, greatly relieved.

Two weeks previously to admission to the University Hospital he again became ill, the chief symptoms being enormous swelling of the legs, orthopnea, and a dry, hacking cough, very troublesome at night. On admission we noted also irregularity of the heart, hypertrophy of the left ventricle, and an easily recognizable mitral systolic murmur. There was also the remant of the left-sided paralysis, and on this side the edema was much greater than on the right side. There were the signs of effusion in the left pleural sac, and the percussion boundary of the liver indicated some enlargement.

The urine was albuminous, but no casts were found.

The diagnosis here made was mitral regurgitation, a diagnosis that was thought to be sustained by the enlargement of the liver. Treatment proved ineffectual, and the man died less than three weeks after admission.

At the necropsy there was found enormous eccentric hypertrophy of the left ventricle, with dilatation of the right ventricle, both cavities, and especially the right, being distended with blood. The heart weighed 1000 grams with the blood in it—750 when emptied, the normal weight being about 337 grams. The *mitral leaflets were a little thickned, but essentially normal.* The aortic cups were normal, as were also the valves of the right side of the heart.

There was a large effusion in the left pleural cavity, as recognized before death, and a patch of congestion in the lower part of the lung. The liver weighed 1285 grams, and was *not,* therefore, enlarged, the normal weight being from 1550 to 1860 grams.

Both kidneys were enlarged, the right weighing 210 grams, the left 220 grams, the normal weight being from 130 to 150 grams. The cortices eseciaplly were widened, and the seat of chronic parenchymatous nephritis, which, in the light of the autopsy, I regarded as the cause of the hypertrophy of the left ventricle.

I have selected, from among many cases these four of combined cardiac and renal disease, in which there was, at the beginning, and in some throughout life, more or less erroneous conception of the exact state of affairs. The first case, that of the shop-girl, aged fourteen, was supposed to be a case of chronic parenchymatous nephritis, while further study showed it to be one of primary valvular disease of the heart, with secondary passive congestion of the kidney.

The second case was one of chronic interstitial nephritis, with hypertrophy of the left ventricle, in which all of the symptoms pointed to primary heart-disease but the true nature of which was easily revealed upon closer study.

The third case was a more complex one than either of the others. An ancestry of gout; a personal history of much gout; an albuminuria, at first small; absence at first of casts, and then sparse casts, all pointed to gouty kidney a supposition by no means weakened by the oppression and dyspnea, symptoms that almost always supervene when the hypertrophied left ventricle of chronically contracted kidney begins to fail. On the other hand, the evident mitral murmur, the moderate degree of hypertrophy of the left ventricle, the stretched right ventricle, the irregular heart, the gastric catarrh, and the dropsy, pointed to a condition of mitral regurgitation which I cannot but think was also present, a view in which I was also sustained by Professor Da Costa, who saw the case with me. Yet the problem was a difficult one, and the question, "heart or kidney?" was carefully debated. It seemed to us that in this case doubtless both were effected independently of that interdependence that always exists between these two important organs. That is, there was interstitial nephritis and endocarditis, both the results of the same cause—gout—and the cooperation of these two conditions accounted for the intractableness of the case. Unfortunately, in this case there was no autopsy to settle the question, and it must always remain a matter of probabilities.

That such a state of affairs does occur is shown by the following interesting case:

Case V..—C. K., a Russian coal-miner, aged twenty-eight, from Schuylkill County, was admitted to the Hospital of the University of Pennsylvania, April 12, 1893. On account of his total ignorance of English, no family or previous personal could be elicited, except the indefinite statement that his feet had been swollen for ten years, and yet that he was perfectly well up to three weeks before admission, and working in a coal breaker.

On admission he was gasping for breath, in an unpleasant, grunting manner. His heart was extremely irregular, and at times beat so rapidly that it could scarcely be counted. It is noted soon after admission at 144, again at 166. His respirations were noted at 36; and when his pulse was 166 the respirations were noted at 46. His temperature was normal. His belly was distended with fluid. There was edema of the feet and legs—in fact general anasarca—and he lay in such a stupid state that it was difficult to get any information from him. On admission he was expectorating a blood-stained mucous, regardless of time or place.

Physical examination revealed the liver to be much enlarged and tender; the heart not much enlarged, but acting tumultuously, and no murmur could be detected. Subsequent examination showed the right boundary of the right ventricle at the right edge of the sternum, indicating enlargement of the right heart. The examination of the lungs, on admission, was not satisfactory, because of the extreme illness of the man, and his disgusting, filthy state. The urine was scanty, high-colored, and bile-stained. It contained only a moderate amount of albumin, from one-twentieth to one-eighth of its bulk, but numerous hyaline and pale granular casts.

Under full doses of the infusion of digitalis he improved quite rapidly, the pulse and breathing rate coming down gradually. The rhythm of the pulse also improved, and the anasarca diminished. On the 30th of April his pulse had fallen to 64, and my note reads: "Although the pulse is slow and forcible, no murmur is detectable, yet we feel sure there is mitral regurgitation." His improvement was, however, so great that he was even allowed to sit up. On May 5, his temperature began to rise, and concurrently his breathing to be more frequent. On the

11th the signs of fluid in the left pleura were apparent (probably had shown themselves a couple of days earlier, because, on account of difficulties, he was not examined daily). The respirations were 50, but the pulse did not rise above 108, for the first time a distinct mitral systolic murmur was audible. On the 14th it was thought a murmur was heard, but repeated examinations, even when the heart was at its best, failed to detect anything definite until the 11th. The man died suddenly a day later.

The necropsy was most instructive. The lesions were numerous, but the most interesting in this connection was the association of extreme mitral stenosis, in the shape of a button-hole mitral orifice, and a pair of typical large white kidneys, beginning to undergo contraction. There was also enlargement of the heart, more especially in the direction of the right ventricle, as recognized before death, associated with marked dilatation of the left auricle. There was a left-sided empyema of recent origin, as shown by a fresh layer of thick lymph, probably the immediate cause of death; anthracosis, or miner's lung, with cavities; an enlarged hypertrophically cirrhotic liver ; an enlarged spleen with two pyoid sacs, probably softened infarcts.

The fourth case was a complete surprise in the light of the autopsy; yet I am doubtful whether, with the situation repeated, I would make different diagnosis. The distinct mitral systolic murmur and the extreme anasarca, the scanty urine and plural effusion, all combined to favor the idea that there was mitral regurgitation, while the fact that the man had had two seizures, best explained on the supposition of cerebral embolism, of which a cardiac embolus is the most common cause, seemed to add all that was required to make the diagnosis absolute. One symptom only might have suggested a renal origin, and that was the degree of hypertrophy of the left ventricle, without aortic disease. Mitral regurgitation, while causing hypertrophy of the left ventricle seldom produces the extreme hypertrophy that attaches to aortic valvular disease or chronic renal disease without aortic valve disease. At the same time the extent of this hypertrophy was not appreciated before death, because of the difficulty of investigation occasioned by the naturally thick chest-walls further thickened by anasarcous infiltration. Under the circumstances, the mitral murmur is best explained on the supposition that there was mitral regurgitation consequent on the dilatation of the hypertrophied left ventricle.

Yet, notwithstanding the difficulties encountered in the separation of heart-disease from kidney-disease, there are certain points that, if borne in mind, aid in the discrimination. These points, already referred to, deserve, in conclusion, to be recapitulated: First, the conditions most likely to be associated or confounded are on the one hand, mitral disease and, on the other, chronic parenchymatous nephritis, and the last stage of interstitial nephritis, when the urine, from having been copious and light-hued, becomes scanty and dark-hued, because of failing cardiac power.

CHRONIC PARENCHYMATOUS NEPHRITIS.

Urine scanty and high-colored; high specific gravity; highly albuminous.

Numerous granular, dark granular or fatty casts.

Much dropsy.

No mitral systolic murmur.

As a rule no hypertrophy of left ventricle, which may, however, be present at times.

No enlargement of liver.

No signs or symptoms of arterio-capillary fibrosis.

No retinitis albuminurica.

No history of gout.

Seldom a history of rheumatism; more frequent of infectious disease.

Uremia infrequent.

Partial response to treatment.

CHRONIC INTERSTITIAL NEPHRITIS.
(Last stages.)

Urine though scanty is still light-hued, and has low specific gravity; moderately or slightly albuminous.

Few casts and these hyaline or slightly granular. Often no casts.

Little dropsy as a rule, though when heart fails, dropsy may be marked.

No mitral murmur.

Always marked hypertrophy of left ventricle, except in persons feeble and cachetic at the outset; this without aortic murmur.

No enlargement of liver.

Symptoms and signs of arterio-capillary fibrosis may be present.

Retinitis albuminurica may be present.

History of gout, lead-poisoning, or free eating and drinking.

No history of rheumatism or infectious disease.

Uremia frequent.

Doubtful response to treatment.

MITRAL DISEASE.

Urine scanty and high-colored; high specific gravity; moderately or slightly albuminous; rarely highly albuminous.

Few casts, hyaline or slightly granular.

Much dropsy; effusion into serous sacs.

Mitral murmur.

Moderate hypertrophy of left ventricle; hypertrophy of right ventricle.

Enlarged and tender liver.

No arterio-capillary fibrosis.

No retinitis albuminurica.

Seldom a history of gout, alcoholism, or free eating and drinking.

Probable history of rheumatism or infectious disease.

No uremia.

Generally prompt response to treatment.

These points of diagnosis refer more particularly to uncomplicated cases. With complicated cases the difficulty is greatly increased, and the decision must be one of probabilities. A fact of great value in my judgment in favor of a primary and advanced kidney-disease, is the failure of heart-tonics like digitalis, to produce diuresis, even though the pulse-rate is decidedly reduced by the action of the remedy.

Now, what is the practical bearing of these considerations? I answer, not so much in the direction of therapeutics as in that of prognosis. For, happily, the treatment of these conditions is essentially the same, and to this subject I have given very full consideration quite recently elsewhere. In the matter of prognosis, however, it is of the extremest importance. For in cases of pure mitral disease, not too far advanced, the most favorable prognosis may be given, as evidenced by our experience with Case 1. In the stage of renal disease under consideration, however, and in the combined form with actual structural change in both heart and kidney, the prognosis is very unfavorable, and to mistake the one condition for the other, and to prognosticate accordingly, may seriously jeopardize one's reputation.

BRONCHO-PNEUMONIA.*

J. C. H. LAWRENCE, M.D., GREEN BAY, WIS.

Considering broncho-pneumonia from the standpoint of immediate fatality, and also as a causative factor in later developed chest troubles, it may be classed the most grave of children's diseases peculiar to this northern country.

It has been defined as an acute inflammation of the bronchial lining membrane, which by direct extension and mechanical phenomena incidental to the disease, involves the connective tissues, bronchioles and air cells. Thus the whole lung structure may in severe cases take on inflammatory action.

There is little doubt in my mind that many of the deaths from so-called bronchitis and croupous pneumonia, 'are due to broncho-pneumonia. Again, it is one of the greatest complications of measles and whooping-cough, and may, in many cases, be the direct cause of death credited to these diseases. Bear in mind also, that a large percentage of all cases of pulmonary consumption have their starting-point in the disease.

Changes of temperature and humidity unquestionably influence, if not cause the disease.

It is found to be non-prevalent in families and localities where bad hygiene prevails, but seems in this latter instance to take on a more unfavorable course. Some authorities claim for it a specific origin, even having gone so far as to discover a micrococcus.

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[1] "The Relations between Renal Disease of the Circulatory System," International Clinics, Vol. 4, second series, 1893. "Treatment of Chronic Valvular disease of the Heart," *Therapeutic Gazette*, April 15, 1893.

* Read before the Fox River Valley Medical Society, 1893.

Probably the disease starts by an irritation of the bronchial mucous membrane, from various causes, and is developed by direct extension to the lung tissues. When it occurs as a complication of measles, extension takes place more rapidly than in the simple form, the initial stage being so short as to render it unappreciable. Notwithstanding its extremely short duration however, pus is formed in the smaller bronchioles and air cells with alarming rapidity and profuseness. Attended by whooping cough on the contrary, its advent is slow and insidious. Occurring as a distinct disease itself, the bronchial stage may last from three to ten, sometimes twenty, days.

When the lung tissue is invaded the temperature rises to 103° or 105°. The cough becomes hacking, painful and frequent. The inspiration more rapid, shallow and diffcult. The countenance takes on an anxious look as efforts to breathe become more labored. The progress of the inflammation may be extremely rapid so that all the lung tissues may be at once involved, or it may be slow and gradual, occupying several days. When large areas of lung substances collapse, temperature falls. The cough becomes less, sometimes disappears. The countenanee becomes livid, the skin cool and clammy with more or less perspiration. The distress for breath momentarily increases and unless the condition soon changes for the better, death rapidly follows. Successive collapses, occurring in other parts of the lung are accompanied by symptoms similar to those enumerated, but their onset is more gradual. Death may result from exhaustion following lung fever, cough and continuous struggle for breath. When recovery takes place the period of convalescence is very prolonged, so much so in fact, that it is difficult to define the stage of resolution.

It is during dentition that bronchopneumonia most frequently occurs. It has also been observed that scrofulous and rickety children are almost apt to contract it.

It can scarcely be confounded with any other disease except croupous pneumonia. To be sure it resembles acute bronchitis in the beginning, but the evidence of grave conditions may not be accounted for by a simple bronchitis. It differs from croupous pneumonia in that the attack often follows previous illness, as whooping cough or measles. The fever rarely reaches 104-105° in the first twenty-four hours of the attack. Dyspnœa more pronounced; accessory respiratory muscles brought into action; patients are usually under three years of age; consolidation of patches of lung on both sides, over which dullness on percussion is not marked; moist subcrepitant rales and occasionally coarse crepitation; its indefinite duration, prolonged convalescence and fatal tendencies.

Physical examinations reveal very little in the beginning, and it is only after the disease has made some considerable progress that we are enabled, by this means, to differentiate it from other forms of lung trouble. Hence we have to rely mainly on rational signs. The respiration, as the bronchioles and parenchyma become implicated, increases in frequency, sometimes numbering 60 to 70 per minute. The pause which ought to follow expiration now precedes it; costal breathing takes the place of abdominal; and retraction of the epigastrium and the intercostal and supraclavicular spaces are further evidence of incomplete expansion of the lungs. The pain which accompanies the respiration may be due to pleuritis, but the moaning sound on expiration may be present when no pleuritis can be found, and then it is not always to be accounted for. Hydrothorax is extremely rare though pleurisy is present in a large percentage of cases, and generally circumscribed. The tongue and mouth, in protracted cases, become dry; sordies collect; thirst is intense; frequently there is vomiting and diarrhœa; stupor in varying degree, is nearly always present—sometimes it is so profound as to simulate coma.

The prognosis should always be guarded, for although the physicial signs show little to cause alarm, consolidation and collapse may come on without warning and speedily render a seemingly mild case a very grave one. In children of one year and under the fatality is greatest, the younger the child the less the chance of recovery.

Has there been previous illness? Especially whooping-cough or measles? What are the powers of resistence in the child? Does it take and retain nourishment? Is there diarrhœa? Does the temperature remain high for a considerable time, and if so, how does it affect the patient? Is the heart's action strong? If not, how is it affected by stimulants? Is there stupor or delirium, and how severe? Is the cough loose, and are the efforts strong enough to force the bronchial secretions above the glottis? These are all pertinent questions concerning which we should satisfy ourselves before making statements or promises which might afterward make us appear at fault.

So far as possible, provide for the comfort of the patient. It should have intelligent nursing; the room should be well lighted and ventilated, and a temperature of 70° F. maintained. Water in an open vessel should be kept constantly on the stove. If this does not moisten the air sufficiently, steam may be produced by dipping hot flat-irons or bricks into water. Poultices on the chest are worse than useless. Apart from the trouble of preparation, they might embarrass respiration and are uncomfortable, hot or cold. I find the best results from using a vest of cotton batting next the skin, covering the entire chest, sides and back. It should fit snugly but not tight. The patient should be bathed frequently without removing the covering.

If opiates are indicated, the camphorated tincture, or the syr. Doveri, combined with solution of acetate of ammonia, will be found the most convenient. For the cough, apomorphia in doses of 1-200th gr., may, if necessary be repeated every half hour until vomiting is produced. These are only adjuvants however, to the remedy in which I place main reliance, which is calcium sulphide. It not only relieves the fever and cough, liquifies the bronchial secretions, prevents diarrhœa and vomiting, but it cuts short the attack and reduces to a minimum the liability of the disease leaving behind it any serious after effects. I find a ten per cent. triturate, in one or two grain doses, the most convenient and efficient. Powders may be placed upon the tongue, either dry or slightly moistened, and repeated often enough to produce and maintain the characteristic odor in breath and gaseous dejections. Diet should be light and nourishing; water freely allowed; brandy or whiskey in water or milk during attack, and to hasten convalescence change the air, etc.

SOCIETY REPORTS.

WESTERN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Annual Meeting, Kansas City, Missouri, December 27th, 1892.

[OFFICIAL REPORT.]

DISCUSSION OF PAPER SURGERY OF TUBAL PREGANCY.

[This paper appears on page 507 of this issue]

Dr. King: Mr. President, I feel very much like doing as I heard of a gentleman once doing, who got tired saying his payers at night. He wrote out a beautiful prayer and pasted it up on the head of the bed, and when he retired, he pointed to it and said, "Lord, those are my sentiments."

I have not had the experience in this subject that would warrant me in discussing this paper and undertaking to advance new ideas upon it or in any way to controvert any of the positions taken by the writer. Dr. Price has certainly had enough experience in this matter to warrant him in taking and holding the position which he says he has proven at the bed side with his apron on. Knowing him, as we do, as a worker and a thinker, we are bound, at least I feel bound, to accept his opinion.

I say I have had no experience in this matter; I mean to say that I have had no experience in operating. Some years ago I saw three cases, in the course of six or seven years, that I diagnosticated, under the then teachings of Emmet and others, asbeing pelvic hæmatocele—three cases in which there had been sudden rupture with hemorrhage, which was made manifest by the doughy feel through the vagina. In one instance I remember it appeared so low down at the side of the vagina as to make it perceptible to the eye. I then called them hæmatocele, and I have no doubt now in the present advanced knowledge of the matter, they were all three cases of ruptured tubal pregnancy. I presume in those three cases the fetus escaped upward, and, as I wrote to Dr. Price when he got through his speech, that

"My little cases sat upon the pancreas
Waiting for Dr. Price to come;
And to while the weary time away.
Played upon the light duodenum."

Neither of the women died; they all three got well. How they are doing now, I can't say because I have not had a chance to observe the cases since. I saw two of them in consultation, and one of them in my own practice. One of them finally moved away. I don't know what their condition has been since. I saw another case, which without rupture, I diagnosed as tubal pregnancy; it was seven years ago and, following the advice of Beard and Rockwell in the methods for destroying the fetus with currents of electiricity, I used that. After using it for three or four times there was a decided diminution in the size of the tumor. I felt satisfied that I had destroyed the fetus. Last week I was called to see this same woman in Sedalia, my old home, and I found her in bed with this history: up to a few months ago she had been unusually healthy; she had gained in flesh and had been stronger. I believe she had not missed her menstruation, but had gone to bed recently with a hemorrhage, and upon examination the physician made out what he thought was a fibroid tumor, and what I am satisfied was a nodular fibroid. In the examination I made I found a fibroid which seemed to have bored posteriorly into what was no doubt a retroverted uterus, with one projection of the tumor anteriorly up into the abdominal cavity, some old mass in the region of the left tube and the ovary softening and appearing to be an abscess. The woman had had a rise of temperature. She will come here in the course of two or three weeks, for operative procedure and some of you will perhaps see the case with me and we will see what it is. I think I destroyed the fetus at that time and now there has followed the development of a fibroid tumor. The woman is thirty-eight years old, and bore one child twelve years ago, and this condition you know has favored development of a fibroid. I think she has a very complicated tissue there. I will perhaps remove the tubes and ovaries with this mass, and perhaps do an abdominal hysterectomy.

I want to say in conclusion, that I do not undertake to discuss this paper; my experience doesn't warrant it. I must accept what Dr. Price has said. But I do want to join with the members of this society in thanking Dr. Price, not only for the admiral paper but for the admiral teaching he has done in his visit here.

REFINED TASTES.—A rather pointed story is told of Senator Blackburn, of Kentucky, and the late Senator Beck, which we give without varnish.

Upon one occasion it was necessary to test some old Bourbon whiskey before shipping the Simon Pure to a fastidious customer. The anxious dealer bethought him of these two great men, who were universally admitted to be connoisseurs in the article, and begged their indulgence in the matter of tasting the liquor. Blackburn swallowed a sip, smacked his lips, looked a little bit critical, tried it again, and then said, "It is fair,—very fair,—but," again smacking his lips, "It seems to me I taste iron in it." The dealer looked discouraged.

Beck went through the same process of tasting and trying, at last exclaiming, "That's good,—very good,—but I think I detect a taste of leather."

The dealers face fell. But, feeling sure he had a superior article, he investigated. After diligent search, he found a *carpet-tack with a leather cap* in the bottom of the cask.—*Harper's Magazine.*

His Offspring.

"My pigmy counterpart," the poet wrote,
Of his dear child, the darling of his heart;
Then longed to clutch the stupid printer's throat
That set it up—"My pig my counterpart."—*Harper's Weekly.*

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SATURDAY, SEPTEMBER 30, 1893.

EDITORIAL.

THE DOCTOR AND THE COOK.

It is the popular belief that the relation between the physician and the cook is only that the former profits by the work of the latter. And in truth the cook has been a stay to the physician—an inexhaustible source of work for the medical man.

That medicine has become the science of the prevention of disease rather than the cure of it, is true despite weary iteration. Likewise is it true that the intelligent application of dietetic and hygienic measures is supplanting the empirical use of drugs. More and more is the attention of the medical profession given to removing the predisposing as well as the exciting causes of disease, anticipating rather than awaiting the actual presence of sickness. Greater dependence is placed upon fortifying and reinforcing the citadel threatened than upon trusting to the explosion of some hidden mine to rout the enemy in actual engagement. This tendency of modern medicine is the natural outcome of appropriating the advanced results of collateral sciences and making practical use of them in the interests of diseased humanity.

Medical students are prone to regard the time spent in the study and the laboratory on such subjects as physiology or chemistry, as being out of proportion to the benefit to be derived when the opportunity comes to put to practical application the lessons learned as students.

This objection appears pertinent, and even logical, so long as there obtains that mis-begotten product of ignorance and superstition, the belief that treatment consists principally in the application of drugs, and that diagnosis means the selection of a proper remedy.

That the student mind does not appreciate the great importance and mutual dependence of his preparatory studies, is more the fault of his teachers than of himself. He pursues his various studies as separate and distinct branches of science. He has a vague impression that these different branches bear more or less on the general practice of medicine. Just how he cannot at the time understand, and he is left to his own resources to find out. The average medical student, especially if he has received no training preliminary to his professional education, is not capable of judiciously selecting and assimilating that which is valuable and necessary from the heterogeneous chunks of information hurled at his devoted head during his attendance upon two or more full courses of lectures in a medical school.

It follows that he gives his attention to what he regards as the most important studies, to the neglect of those whose value is not evident to him, and not until he has graduated and, having survived the inevitable attack of macrocephalus, learned how utterly inefficient has been his preparatory training, does he appreciate the importance of the branches neglected. How could it be otherwise when the great one from his chair of Practice, delivers an oracle concerning some disease—its etiology, pathology, symtomatology, diagnosis, prognosis and treatment—all dogmatically and without an anatomical, physiological or chemical reason or explanation in the whole extract from ancient authorities.

It is no easy matter to specify just what and how medicine should be taught, but, it is evident that there will be a great economy of time and energy when admission to the study of medicine can be gained only by demonstrating a thorough grounding in the elements of the collateral sciences. Surely the medical school is not the place for teaching elementary chemistry or botany or physiology or the like.

When the student comes ready to apply principles already learned, teachers will no longer be able to comfortably give kindergarten shows, but in order to survive will be compelled to strain every nerve to perform their true functions, namely the gathering, sifting, selecting and preparing, from all sources of modern medical thought, pabulum ready for digestion and assimilation by discriminating minds of earnest researchers. This may be an ideal condition, but the steady advancement of the standards of medical education gives much promise for the future.

Under existing conditions, the physician, painfully realizing his lacks and the necessity of unlearning much that he has been taught, seeks information from all available sources and thereby acquires knowledge. This acquired, he endeavors to put it to practical use. Herein is wisdom.

The subject of food and its proper application is now assuming imposing importance. Familiar with the physiological processes of tissue building and waste, the whole subject of nutrition is opened up for study. This brings into play chemical as well as physiological wisdom—that is knowledge applied. But to obtain the desired ends it is not sufficient to know only the general character of the required foods. The physician must know not only what food stuffs will answer the requirements, but he must know how such food stuffs are to be prepared to work efficiently. This carries with it some knowledge of the kitchen for the simple reason that cooking involves processes of chemical change which may make or destroy entirely the value of the food stuffs.

In sooth, the physician is expected to know all of some things and some of all things. The physician knows it is not sufficient to give the very vaguest instructions as to what a patient may or may not eat, and trust to the ordinary kitchen mechanic to produce the desired results. He must, if necessary, be able to give for the preparation of food directions as specific as he gives the pharmacist for the preparation of medicine. This does not necessarily mean that every physician must qualify as a *chef*. It will be sufficient for practical purposes, if every physician will study the food stuffs in common use in the locality in which his work lies, and learn so that he can teach the modes of preparation by which the nutritive values of the various food stuffs may be developed.

The physician in the kitchen is no longer a joke.

TRANSLATIONS.

PEPSIN AND THE FERMENT LAB; ESTIMATION OF THE DIGESTIVE POWER OF GASTRIC FLUID; ARTIFICIAL DIGESTION.

Bouveret (*Gaz. Med. de Paris*, June 3, 1893) remarks that the gastric juice contains two ferments to which it owes its digestive activity, pepsin and the ferment lab or the ferment of rennet. The quantity and the quality of these ferments may be modified in pathologic cases, and it is important to recognize these modifications. There are no rigorous methods, however, by which these researches may be made. The pepsin is secreted in the gastric glands, probably by the principal cells, as the substance pepsinogen, the propepsin of Schiff, which as yet does not possess the property of digesting albumin. This property is communicated to it by the acids especially by hydrochloric acid, which appears to be of all the acids the one which separates from pepsinogen the most rapidly and the most completely the active ferment, pepsin. It is rare that propepsin is entirely absent, even in cases of extensive and grave lesions of the stomach, and the variations of the activity of the pathologic gastric fluids depends upon the variations in the acid element. It is generally admitted that a proportion of hydrochloric acid of 2.5 parts to 1000 is that which most favors the action of pepsin upon albumin, in other words, it is that solution of hydrochloric acid which, with a certain quantity of propepsin, appears to separate the greatest quantity of pepsin. Gastric fluids very rich in hydrochloric acid are not always those which digest the best.

Langley has discovered a means of distinguishing the substance pepsinogen from pepsin; the carbonate of soda destroys this ferment while it is without action upon propepsin. In the stomach mucosa of an animal recently killed, pork for example, there are coexistent propepsin and pepsin which must be separated by appropriate solvents; on heating the mucosa with water both of these substances may be extracted, while glycerin will dissolve only the pepsin. In the gastric fluids the presence of pepsin is usually determined and the degree of activity is approximately estimated. Two conditions may exist: 1. The fluid contains free HCl; 2. The fluid does not contain free HCl. Pepsin always accompanies HCl. It may be, however, more or less active, and the simplest way of appreciating this activity consists in submitting the filtered gastric fluid to the test of artificial digestion. For this purpose the same quantity of the gastric juice should be employed, for example, 10 to 20 centimeters. To this is added some albuminoid substance to digest such as the boiled white of egg, fibrin or the albumen of serum. The white of egg is generally preferred, because it is the most readily procured. According to the researches of Jaworski three hours are required to digest, at the temperature of 40° C., a fragment of coagulated white of egg of 5 centigrammes, placed in 25 cubic centimeters of gastric fluid of normal composition. An hour and a half will digest the same weight of fibrin and the dissolution of the albumin of serum is still more rapid. The method of dilution of Brucke permits the comparative estimation of the quantity of pepsin contained in different gastric fluids.

In the second case, *i.e.*, when the gastric fluid does not contain free HCl, the reaction of Gunzburg is negative. This fluid may be neutral. If albumin should be digested by such a fluid it is due to the accidental admixture of some pancreatic juice with the gastric juice, for a *neutral gastric juice that does not contain pancreatic juice will not digest* albumin. An acid gastric juice containing HCl will not digest albumin unless a part of this acid is in a free state. It is very interesting to search for the presence of propepsin in gastric juice deprived of HCl. Complete absence of this propepsin is very rare, but it is a sign of great value, and indicates, if it is constant, an advanced if not a complete destruction of the glands of the gastric mucous membrane.

Labzymogen and the ferment lab. We know to-day that the coagulation of milk is due to a special ferment, the ferment of rennet secreted by the glands of the stomach. Recognized by Payen, this ferment has been completely studied by Hammarsten. Since then, it is generally designated under the name of the ferment lab or lab-ferment. As in pepsin, the lab is preceded by a proenzyme, the labzymogen from which it is separated by the acid, especially by hydrochloric acid ; in some way in gastric fluids there is ordinarily a certain parallelism between this acid and the ferment of rennet. Labzymogen resists the action of alkalies, which even in very feeble dose, destroy the lab. The influence of lab upon milk is independent of the acids and of the pepsin. Selmi has shown that the lab suffices to produce a coagulation of milk in the presence of lactic acid and Hammarsten has separated pepsin from the ferment lab. Moreover, these two ferments do not act exactly under the same cenditions ; there is needed an acid medium for pepsin to digest albumin, while, lab, also active in an acid fluid, coagulates milk very well in an entirely neutral medium. It is nevertheless probable that the two ferments are secreted by the same glandular elements. Under the influence of neutralized gastric juice milk coagulates in a few minutes. The coagulum, at first voluminous, retracts little by little, and permits the serum to exude; This retraction takes place slowly, the lab passes out in the serum ; in truth, the serum is capable of coagulating a new quantity of milk. The casein thus precipitated is slightly soluble in acids and weak alkalies. The reaction of the medium is not modified during the phenonenon of coagulation ; the liquid remains neutral. The coagulation of milk by acids does not present the same characteristics. The temperature of 34° to 40° C. is most favorable to the action of lab. At 70° C. the lab is destroyed but not the labzymogen. The determination of lab may be qualitative or quantitative, and two conditions exist, as in the case of pepsin, according as to whether the gastric juice contains free HCl or not. In the former case neutralize exactly 10 cubic cm. of this liquid, and add one equal quantity of fresh or boiled milk preferably the latter (Boas), the mixture taking place at a temperature of 38° C. In ten or fifteen minutes, if lab be present, coagulation is completed.

THE ETIOLOGY OF THE PRIMARY CARCINOMA OF THE GALL BLADDER.

Dr. F. Siegert, Geneva, (*Virchow's Archiv*, 1893) says : The question, is carcinoma of the gall bladder the cause or the result of the cholelithiasis which is so frequently observed with this disease. This is answered by the clinicians, as a rule, that the changes found in the gall bladder due to the presence of carcinoma, together with the failure of contraction and the abnormal secretion or formation of free bodies, owing to the degeneration of the tumor, all will aid in the production of gall stones.

The proof of this latter view was not generally acknowledged. Clinically the theory was that first cholelithiasis was present and that later the tumor formed in the walls of the gall bladder ; pathologico-anatomically it was the fact that in this or that case the size of the gall stone present was in direct relation to the age or size of the carcinoma.

A third method is described by Siegert; for instance, if the carcinoma is the cause of cholelithiasis, it would become absolutely necessary that gall stones should form with equal rapidity in primary or secondary carcinoma of the gall cyst.

The author has studied the literature of this subject carefully, and has collected a number of cases which have led him to the following result. The primary carcinoma of the gall bladder was found, 15 per cent. in males and 83 per cent. in females (2 were doubtful, since their description in literature was somewhat vague). Of 95 per cent. of gall stones, in 3 per cent. there was no primary carcinoma and in 2 per cent, it was doubtful. On the other hand there were found of secondary growths 77 per cent. in males and 23 per cent. in females; of these there were in from 15 to 16 per cent. gall stones present, and in 84 to 85 per cent. none.

Through these facts we have a certain amount of proof that secondary carcinoma of the gall bladder does not always of a necessity produce cholelithiasis. Should this occur in the secondary form occasionally, it may be just as much due to a possible previous formation of stone.

In primary carcinoma gall stones are found almost without exception while in the secondary form only exceptionally. For this reason the author thinks that the formation of the stones in the primary carcinoma are not the result, but may be the cause of the same (stones were found in cases in which macroscopically a carcinomatous change of the gall bladder could not be proven, reference case 7 of the original.)

The primary carcinoma is found 5 to 6 times more often in women than in men; the cause is supposed to be a mechanical one, namely, tight lacing. The secondary form, however, occurs more frequently in the male, which can be explained by the fact that the primary seat of the carcinoma is more often found in the digestive tract, which is not the case in the female.

CONTRIBUTIONS TO THE OPERATIVE TREATMENT OF CONGENITAL HIP-JOINT DISLOCATION.

Dr. Hoffa, Wurzburg, (*Munchn. Med. Wehnschr,* 1893) reports the result of cases which he had operated upon and described 3 years ago. The operation consists in the reposition of the dislocated head of the femur into the newly made, or frequently present, acetabulum. The author has, up to date, performed this operation 26 times. His experience has taught him that it should be done early, before the muscles attached to the pelvis and the thigh become contracted, otherwise it may become necessary to relieve these contractions. The theories differ somewhat about the success of this operation in congenital dislocation of the hip. For instance, the supposition that in most cases there is an absence of the acetabulum, is not advocated by the author, since close observation will always disclose a flattened space where the cavity should be. Even if not quite plain one can be readily formed artificially.

In order to perform this operation it becomes necessary to increase the depth of the old cavity, care being taken that the margins of this new formed acetabulum remain sharp. This will favor the normal position of the head of the femur, and is more readily done in the cases of congenital dislocation of the femur, since the region of the acetabulum forms the thickest portion of the entire pelvis. The head and neck of the femur present generally no difficulty after once having been replaced.

The author gives further new instructions about the technique of the operation and then presents the results of his operations. The operation will do away with the limping and lordosis of the one side; if the dislocation is on both sides, the results are equally good.

There is one point to remember in the one sided luxation, and that is, that the operation will not entirely remove the probable shortening of the extremity, since during the time before treatment it has become somewhat diseased.

Without operation in the orthopædic treatment such good results are never obobtained. This is amply shown in the decidedly hypertrophied ligamentures which becomes inclosed between the head of the femur and the pelvis.

An Attorney's Speech.—A colored attorney practicing in a court not a thousand miles from Richmond, Va., animadverting strongly upon the testimony of an adverse witness, used the following somewhat remarkable language:

"Gentermens ob de jury, yo dun heard all dat bal-haded conterband dun said. But, gentermens, he didn' tell de trufe. Ef he had er ben swore lak he would er ben swore thirty yeahs ago, ef he had er ben tole that unless'n he told de trufe his ears would er ben cut off smack up ter his hade, he would er told de trufe. But stidder doin' dat he kim heah an frejerdis dis jury gin the prisner at de bah, dat' ignunt, discomposed, and eluded man."—*The Green Bag.*

ABSTRACTS.

WHEN CATARACT IS READY FOR OPERATIVE TREATMENT.

Dr. Edward Jackson, of Philadelphia, in a paper read before the Pennsylvania State Medical Society, discusses this subject. He says:—

In former papers read before this Society, I have insisted on the importance of completeness in the early diagnosis of cataract. At a later stage, the important point in diagnosis is to determine when the cataract is ready, and ought to be removed. This determination rests upon the recognition of the so-called maturity of the cataract. This maturity may be considered from two points of view—the condition of the cataract as to the interruption of vision that it causes, which might be termed its *visual maturity*, and, second, its condition with reference its *surgical maturity* to easy and—complete removal.

The amount of interference with vision that cataract causes even when this has reached its maximum for the individual cases, varies greatly. In some cases this interference is not very great, even after many years of continuance of the opacity, and with very little probability of any further increase of interference, however long the patient may live. With this condition too, of slight intereference with vision, the cataract may be surgically mature. In another case the opacity may reduce vision to more perception of light, although the cataract is far from surgical maturity.

The amount of impairment of vision that will justify or demand the extraction of a so-called senile cataract will vary with the circumstances and occupation of the patient and the probable future course of the disease if left to itself. After cataract extraction, vision equal to 1-10th as suggested by Graefe, has been looked upon as a perfect result; a higher standard of vision has been proposed in this connection, as by Schweigger, who suggested 1-6th. We can, in any case of cataract extraction, except that the result of operation will be at least this good, with the possibility of being better. Hence, when vision has fallen this low, and the patient's occupation demands the most perfect vision, so that such an impairment is for purpose of labor, practical blindness, we may regard the visual maturity as warranting a resort to operation.

Visual maturity depends, of course, wholly on the amount of opacity in that portion of the lens in a line with the pupil, either in the nucleus or cortex. Surgical maturity depends rather in the alteration that have occured in the portion of the lens lying in contact with the capsule, quite irrespective of any alteration in the nuclear part of the lens.

The surgically mature lens is in better condition for extraction, first, because the cortical substance is less adherent to the lens capsule, and, second, because the opacity of this cortical substance enables the surgeon to determine when it has been completely removed. The opacity of the nucleus is less important, because in senile cataract this comes out as one mass with no risk of a portion being left behind. It is possible for a clear lens to be surgically mature, as in the case of old persons, where the whole lens has become firm and would come out as nucleus. But such surgical maturity alone would not justify removal.

After the lens has undergone degenerative changes, and reached the period of surgical maturity, these degenerative changes generally continue and in time make the cataract less favorable for removal—it becomes hyper-mature. Hypermature cataract may present some fluid portions, but generally presents some portions that are harder and more brittle than any part of a recently mature cataract, if not actually calcareous. A lens in such condition becomes usually a more noticeable deformity, by reason of the white color that it gives the pupil, and is liable to irritate the adjoing iris, and make an irritable eye, and may give rise to sympathetic irritation of the other eye. It is, therefore, best to remove a cataract as soon as it becomes surgically mature.

From what has been said, it will clearly appear that there are two factors to be considered in determining the time for cataract operation. First, the interference with vision, which will fix the time that such operation is desirable; and, second the conditions which influence the ease of complete removal, which will determine the time when the operation can be performed with the greatest ease and prospect of success.

So long as a patient preserves vision in one eye, the impairment of vision in the other will have little weight in determining the time of operation, because, even if a perfect visual result could be obtained by operation, the difference in refraction of the two eyes would leave binocular vision still impossible. When, however, the power of vision of the second eye becomes so far impaired as to cause interference with, or complete suspension of the customary occupation, the indication of visual maturity is present.

The question will then arise, Is it necessary or best to wait for the surgical maturity of the more advanced cataract? In former years this was always a very serious question and generally to be decided in the affirmative. Although a long period of comparative or complete blindness was thus entailed, there seemed to be no other way to give the patient a good chance for ultimate relief. The gravity of this period of waiting, the loss of time it entails on persons whose prospect of life is at best comparatively short, the reduction of many from self-support to dependence, and the unfavorable influence exerted on the general health of the individual by a period of idleness and comparative helplessness, have stimulated surgeons to seek for methods by which it might be abridged.

The method of rendering the lens opaque by puncturing with a needle as is done in cataracts for young people, has, from time to time, been tried in senile cataract, but has not been found safe or satisfactory.

An operation for the purpose of hastening surgical maturity that has gained general recognition by the profession is that of Fœrster, who removed a portion of the iris, and by trituration of the cornea, and through it the lens lying in contact with it, immediately after the iridectomy, secured the early surgical maturity of the cataract. The trituration with the iridectomy, however, is itself quite a formidable operation; and its results were extremely uncertain, although possibly it is capable of development into a more reliable operation.

But with the reintroduction of extraction without iridectomy, it has fallen still further into disfavor or neglect.

Dr. Bettman, of Chicago, has however, proposed an operation which he calls direct operation, in which he taps the anterior chamber and introduces a spatula into a direct contact with the lens itself and performs a similar stroking of its surface.

Dr. White, of Richmond, acting on a suggestion of Dr. Pooley of New York has also modified Fœrster's operation by omitting the iridectomy. Simply by tapping the anterior chamber and drawing off the aqueous humor, so that the lens falls in contact with the posterior surface of the cornea, the same effect of artificial ripening of the cataract is produced.

These operations, of which the last is probably the most valuable, furnish the means of securing surgical maturity so soon as a cataract causes sufficient impairment of vision to constitute an indication for its removal. Then, too, the advances made in the operation of extraction, enable us now to extract cataracts before they are surgically mature with great safety. For this purpose, the washing out of the anterior chamber, as the last step of the operation, is a most important advance. One of the best means of doing this, and the one I have employed, is that described by Dr. Lippincott at the meeting of this Society in 1890, at Pittsburg.

The danger of inflammation after the extraction of an immature cataract seems to be through the leaving of portions of lens substance in the anterior chamber. This may be entirely prevented by the washing. There is also the risk of not entirely removing the cortex from within the capsule. This, however, does not endanger the safety of the eye, but merely necessitates the doing of an operation for secondary cataract and detracts from the brilliancy and impressiveness of the immediate result.

From what has been said, therefore, it is evident that we can now with great safety, either by preliminary ripening, or by extraction of a cataract not surgically mature, as may best suit the particular case proceed to the operative treatment of senile cataract, so soon as the visual impairment becomes an indication for operation.

In deciding when the impairment of vision is sufficient to warrant any operation, it should be borne in mind, however, that brilliant as are the results of cataract extraction, the removal of the lens, entails the necessity of wearing cataract glasses, which are often so annoying and unsatisfactory, and present such difficulty to the elderly patient to become accustomed to the distortion of the images they cause, that, as Landolt has said, the patient is often inclined to complain more of his glasses than of his cataract. Hence, aside from the small risks of the operation, the certainty that the patient will experience serious annoyance from the necessity of using his glasses, should make us hesitate about the abstraction of cataract, unless the improvement of vision to be secured by it will be marked and unmistakable.

While it may be best for the patient to prevent a long period of enforced idleness and blindness, at least some slight experience of such a condition will have a beneficial influence in lessening his annoyance at the difficulty of seeing under the the conditions of aphakia.

In the cataract of young people, whether congenital or tranmatic, the indication for removal is also the probability of improved vision. Young people commonly have less difficulty in becoming accustomed to cataract glasses, and will, in a short time, become entirely satisfied with them, especially if they have not known distinct vision prior to the removal of the catract. On the other hand, if the opacity of the lens, still permits a considerable amount of vision, the young person possessing the power of accommodation, has an advantage that the cataract glass cannot give, and which should be considered before deciding on the removal of the lens.

In many lenses, however, that present partial cataract, this power of accommodation is much less than in normal eyes of the same age, and, often can only be exercised or is liable to be exercised in such a way as to cause eye strain and consequent disease, and permanent danger to the other tissues of the eye.

Then, in any doubtful case, there is the additional reason for early operation, in that the younger the child, the simpler the process of removal. Up to about the age of 15, we can expect the lens to be removed by absorption, after one or more needlings, a slower, but safer and simpler operation than extraction, which will probably be necessary at a later date.

In the case of capsular or secondary cataract, the surgical indication, as well as the visual, is for the earliest possible operation. Such membranes always tend to become more tough and resisting the longer they are left, so that as soon as the condition of the eye warrants operative interference, and it is clear that secondary cataract or thickening of the lens capsule will have to be dealt with, the operation should be performed. Those cases are rather to be regarded as fortunate in which such an operation is done to secure the best visual acuteness within the first few weeks after cataract extraction.

With reference to all forms of operative treatment of cataract, the most serious contra-indication to operation, is any impairment of the general health that is likely to prevent or delay normal healing. In looking back over my own experience, I cannot recall any case of an eye lost or vision damaged after cataract operation, in which there was not some unfavorable condition of the patient's general nutrition. This point has perhaps, too often been lost sight of in this era of improved surgical methods, but it is certainly one of the very greatest importance. As a preliminary to any operation, the patient should be brought into the best possible condition of general physical health.

But it must not, in any case be supposed that even serious organic disease will necessarily lead to an unfavorable result, or that in the presence of such disease, it is not justifiable to take considerable risks for the sake of giving the patient sight during what life may remain. Perfectly satisfactory healing occurs in advanced diabetes, or Bright's disease, or in the presence of such a serious local disease as chronic catarrhal conjunctivitis.

SUMMARY. In conclusion, the points to which I wish to direct attention, are

First.—That in considering the question of operation on senile cataract, we must recognize visual maturity and surgical maturity as distinct conditions.

Second.—That it is sometimes best to have surgical maturity before proceeding to the extraction of cataract, but

Third.—Surgical maturity may be obtained by preliminary operation whenever it is desirable.

Fourth.—The time for extraction will then be determined rather by the visual maturity; not, generally of the cataract to be extracted, but of the cataract in the eye that retains the better vision.

Fifth.—That if necessary, for visual and personal reasons, it is proper to extract a cataract surgically immature.

Sixth.—In young people where some visual power remains, the value of the power of accomodation must be considered in determining the question of operation.

Seventh.—If in young persons, the removal of the lens is deemed advisable, it should be done as early as possible.

Eighth.—In all cases, the condition of the patient's general health should be carefully considered, and given the greatest weight in determining the time for a cataract operation.

A CASE OF CHRONIC GLANDERS TERMINATING FATALLY IN AN ACUTE EXACERBATION.

The authors of this paper, Dr. Hallopeau and Jeanselme (*Annal de Dermatal et de Syph.*), 1893, gives at the outset a cursory review of glanders occurring in man.

Elliotson and Rayer were the first to establish direct infection. Alibert was apparently ignorant of its occurence in man; English, American and German dermatologists allude to its manifestations, but with few exceptions have had no personal experience with the disease. The pathological and clinical aspects hitherto have been only lightly touched upon, and therefore the authors have given a full clinical, pathological and bacteriological account of the disease.

The patient, æt. 30, a carter, was admitted to the Saint Louis Hospital in April, 1890, and gave the following history:—He had been a carter for the last six years. Some few months after having followed this occupation, one of his horses was taken ill, evidently with glanders, and in the course of three months had to be killed. It was then that the patient first complained of his symptoms. He suffered from general malaise, headache, periodic febrile attacks, pains in the joints, which were neither swollen nor red, and abundant nasal secretion. He was admitted to the hospital at Chalons-sur-Saône, and there he had several abscesses in various regions of the body; some of these healed spontaneously, others in spite of various applications remained open, discharging viscid yellow fluid. Not getting any better after being a year in the hospital, he came to Paris and was admitted to the Saint Louis Hospital. Again various applications were tried (carbolic acid, boric acid, tincture of iodine, iodoform, aromatic spirits), but without result. Finally, under an anæsthetic, the thermo-cautery was vigorously applied, and in the course of a fortnight the patient left considering himself cured. In fact he was able to work for the next three years without any fresh manifestation of glanders. In 1889 dwellings again broke out, unconnected with the scars of the former abscesses, pan in April he again came to Saint Louis Hospital.

Status presens.—He complained of headache, pains in the ears and slight deafness. There was ulceration of the calate immediately behind the median insisors. He denied having ever had syphilis, but he was placed on an iodo-mercurial course, and mouth-washes of perchloride and chlorate of potassium were used alternately. No improvement followed; at the end of six weeks the ulceration implicated the gums and upper lip, and anti-syphilitic treatment was stopped.

The labial and gingival ulceration healed, but a sinus persisted in the palate. During the next six months chronic inflammation of the right lachrymal sac supervened, and in October an abcess, the size of an egg, developed in the right flank, opening and healing spontaneously within three weeks.

The upper lip again became swollen and ulcerated, secreting a gummy yellowish fluid. The contiguous gum was spongy, pus exuded at the necks of the incisor teeth, which became loose and discolored. The palatal ulceration extended as far as the velum palati. There was an ulcer at the neck of the uvula. The remainder of the buccal and pharyngeal mucosa was unaffected. The larynx was sound, and the voice, as in the past, was quite clear. The nasal fossæ were profoundly altered. The secretion was very abundant, yellowish, viscid, and streaked with blood; there was no ozæna. On examination the floor was swollen, and showed distinct ulceration, especially the mucosa of the right nostril, and a sinus led down to bare bone. The septum nasale was perforated, permitting the passage of a probe from one nostril into the other.

Mercurial treatment was again carried out, but in spite of prophylaxis, it aggravated the buccal and nasal ulcerations, and was consequently stopped. The thermo-cautery was now used with excellent effect: unfortunately, owing to the exquisite pain that persisted for some days, the labial ulcers could not be cauterized as effectually as the others. The general characters of the ulcerative process were as follows :

The ulcers presented a punched-out aspect. The margin was sinuous in some places, dentate in others, but everywhere undermined. The surface was anfractuous, granular, covered with a yellowish viscid secretion through which yellow spots like pustules cropped out. The base was not indurated, and the surrounding area,although swollen,did not present the fibrous thickening of an epitheliomatous ulcer.

In December, 1889, a swelling of the size of a nut appeared in the right canine fossa; this was opened by the cautery, which gave vent to a yellowish viscid secretion The patient suffered greatly from insomnia and sharp shooting pains in the head. During the following five months his condition deteriorated, the right side of his face was inflamed and showed scattered pustules of the size of a hemp-seed. The nostrils were plugged with fœtid crusts; the palpebral conjunctivæ were bathed with a sero-purulent discharge;the ocular conjunctivæ remained unaffected; and the right eye was much the worse of the two. The ulceration of the upper lip had destroyed this completely, laying bare the gum, and in April, 1890, the lower lip was attacked.

Marasmus now set in; constant hectic, uncontrollable diarrhœa, fœtid dejecta, slight jaundice, and albuminuria. Ascites supervened, and the patient sank May 21, 1890.

Three periods may be noted in the above case of glanders.

1. The increased nasal secretion and multiple abscess formation running a peculiar course. This period ended in freedom from any symptom for three years.

2. A second series of abscesses, accompanied by ulceration of the nasal fossæ, hard palate and lips.

3. An acute exacerbation of glanders with exitus lethalis. The diagnosis was surrounded with difficulties, and it was only after the signal failure of mercurial treatment on the two occasions, the absence of any signs of tuberculosis and of tubercle bacilli in the secretions, and careful consideration of the patient's history and occupation, that suspicion was aroused of its being a case of equinia.

Drs. Hallopeau and Jeanselme, by cultures and inoculation experiments on guinea-pigs and on an ass, proved conclusively that their patient was suffering from glanders.

The organisms are short rectilinear or slightly curved rods, thinner at their ends than in the middle, thicker than but not quite so long as tubercle bacilli. The equinia bacilli were never found in masses, but either solitary or in groups of two in the neighborhood of aggregations of leucocytes.

As regards the cultures, these when sown on potato presented an amber color on the fourth day, becoming reddish-brown later on. In bouillon fine spiral filaments appeared the following day after insemination.

In the experiments on guinea-pigs, all of which succumbed to equinia, it was found that in males, when the peritoneum was injected with the virus, suppuration of the tunica vaginalis testis invariably followed, which was not always the case when the skin was the site of inoculation.

The ass showed signs of equinia after being inoculated with cultures derived from potato-media.

The authors draw the following conclusions from their study of the above case:—

1. Chronic glanders may last as long as six years, and this is not exceptional.

2. The disease may remain quiescent and, contrary to Tardieu's observation, as long as three years.

3. Glanders should be suspected after a series of multiple abscesses—subcutaneous or intra-muscular—and in the presence of ulceration of the nasal fossæ, of the buccal mucosa, of the velum palati, and painful swelling of the lacrymal sacs with purulent discharge from the nostrils.

4. The swellings—farcy buds—may discharge and heal spontaneously: the latter is rare. Sinuses that persist would seem to preserve indefinitely the property of transmitting equinia—at least inoculation experiments prove this.

5. The specific ulceration has a predilection for the buccal and nasal mucosæ: in the above case it attacked the lips—the first on record.

6. These ulcers resulted from the breaking down of gummy swellings; they were not consecutive to abscesses, as Tardie had stated, and no suppuration occurred in the tissues of the lips.

7. They differed from syphilitic ulcers, in presenting irregular undermined margins, anfractuous bases studded with yellowish prominences, abundant viscid secretion—farcy oil—and in their resistance to anti-syphilitic treatment. Their course is phagedenic in nature, and hideous deformity often results.

8. The acute fatal exacerbation may start from the nasal fossæ spreading along the nasal ducts, analogous to severe erysipelas.

9. From erysipelas glanders differs in the absence of glandular enlargement, and in the presence of profound destruction of tissues accompanied by formation of pustules.

10. The acute attack may last as long as forty days.

11. The secretions of the labial and nasal ulcers, and especially that of the conjunctiva, are exceedingly virulent. The urine of the patient during the acute exacerbation of equinia gave negative results on inoculation.

12. In all the secretions—both of the patient and of the animals—the specific glanders bacillus was present, either alone or with other micro-organisms (staphylococci).

13. To facilitate diagnosis, cultivations should be made on potatoes, which assume in a few days a reddish-brown color. Peritoneal inoculations in male guinea-pigs are followed in forty-eight hours by characteristic suppuration of the tunica vaginalis testis.

14. The only efficacious treatment is cauterization with Paquelin's cautery, systematically and thoroughly carried out. —*The British Jour. Dermatology.*

THE SERVANT WAS HORRIFIED.—Dr. S. had last winter a newly-arrived Hibernian for a servant; he had also recently purceased a pair of porpoise-leather boots. His wife, attracted by the novelty of the new foot-wear, asked the doctor in the presence of the servant what they were made of, to which he responded "Porpoise-hide."

Shortly after the lady from the Emerald Isle interviewed Mrs. S., and announced her intention of "laving whin me week is up." Mrs. S., somewhat surprised, asked the disturbed domestic the reason for her announced departure, to which Bridget responded, with a horrified air,—

"Yer husband is a docther, mum, an' I've heard them docthers do be cuttin' up people, an' didn't I hear um, wid me own ears, say that the boots of him were made of pauper's hide? It's me own ould father that died in the poor-house, an' I wouldn't be sarvin' a haythen that uses the skin of the poor to cover his dirthy feet wid."—*Boston Commercial Bulletin.*

UNPREJUDICED ADVICE.—A Western Senator tells a story of a man travelling in a parlor-car between Omaha and Denver who fell asleep and, as *Punch* would say, "snored profusely from the nose," so that everyone in the coach was seriously annoyed. Presently, says the St. Paul *Dispatch*, an old gentleman approached the sleeper, and, shaking him, brought him out of his slumber with a start,

"What's the matter?" he exclaimed.

"Why, your snoring is annoying every one in the car," said the old gentleman, kindly.

"How do you know I'm snoring?"

"Why, we can't help but hear it."

"Well, don't believe all you hear," replied the stranger, and went to sleep again—*Lippincotts.*

CURRENT LITERATURE REVIEWED.

THE ANNALS OF OPHTHALMOLOGY AND OTOLOGY

for July commences with a paper by Edward Jackson, M. D., on

Method in the use of Test Lenses,

the principal merit of which is that the writer emphasizes the necessity of adopting "method" in determining the refraction of the eye, especially in the use of the test lenses. His "own plan is, after ophthalmocopic examination, which gives an approximation to the refraction, to employ the ophthalmometer, and then the shadow test. In this way the correcting lens is determined, usually within a limit of 0.500 of inaccuracy. The trial with test-lenses is then begun by placing this approximate correction before the eye, finding what vision it gives, and then endeavoring to improve it."

This plan is excellent in theory, but it may be remarked, that the reverse order is often times adopted by other observers, unless opportunity is given for testing with lenses at a subsequent sitting, for not unfrequently the ophthalmoscopic, the ophthalmometric, and skiascopic examinations are in themselves so dazzling and exhausting to the patient, as to unfit him for a subsequent examination with lenses without considerable rest. Specialists as a rule are enthusiasts and when absorbed and interested in "a case" they are too often liable to forget the fact that the patient is becoming fatigued by a prolonged examination. Most patients are somewhat "nervous" when they come to the oculist for the first time to have their eyes examined, and what is familiar to him is altogether new and strange to them; so that a first examination has to be conducted with considerable tact, in order that the patient may feel himself at his ease, and not be vearied by the ordeal.

Dr. Jackson recommends that the "changes in the strength of the lenses should be made by the alternate placing and removing of a supplementary lens in front of the one already selected. These changes should always be sufficiently great to decidedly affect the distinctness of vision, being in different cases and different stages of the test proportioned to the acuteness of vision obtained, and to the patient's powers of accurate observations. The principle of reversal of cylindical lenses should be applied by alternately trying supplementary lenses of opposite kind, or turning the axis first in one, then in the opposite direction. It is essential from time to time to check the answer of the patient, as to his impressions, by requiring him to read aloud the letters on the test card."

This article is followed by one on

The Pernicious Influence of Albinism upon the Eye,

by George M. Gould, M. D., who has some very positive opinions about albinism. Whilst admitting that there is a mystery surrounding its etiology, and the curious fact that perhaps only one or two members of a large family born of perfectly healthy parents, will be affected with albinism; he is very positive in asserting that the deficiency and dazzling of vision is principally dependant upon the lack of pigment in the iris, and that the symptoms usually found to accompany it are really the consequences of that same condition, and he cites several cases in support of this opinion. He says: "the pathological significance of albinism, lies, I believe, solely in the fact that the iris or diaphragm of the ocular camera is transparent, or so nearly so that it does not act as a true photographic or physiological diaphragm. From non-opacity or non-pigmentation of the iris follows the entire train of evil results that afflicts the albino, and from this slight cause alone. The combination photophobia, nystagmus, ametropia (often also insufficiency or strabismus), and amblyopia presents a union of four frightful ocular defects that leaves little to add of worse, but I wish to emphasize again my conviction that, each and several, these four things are directly or indirectly due to the etiological factor, a non-pigmented iris. A non-pigmented choroid and lid may exaggerate the evil."

Dr. Gould finds that proper correction of the ametropia lessens eye-strain, lessens photophobia, and increases the power of near range vision and he is hopeful that by employing London smoke coquilles having a round segment of say five-eighths of an inch in diameter exsected therefrom directly in the line of the visual axes, and into the openings inserting transparent lenses with the patients' ametropic correction, the peripheral portions of the retina will be shaded, the image fixed accurately at the macula and the nystagmus prevented, with the nesessarily resultant cure of the amblyopia.

A paper by Dr. Howard F. Hansell, on

Functional Exotropia,

adds fresh evidence as to the futility of tenotomy of the external recti in cases of functional exotropia with loss of converging power; and the advancement of the interni has also in his hands proved unsuccessful. He considers "the most satisfactory results are obtained from a combination of tenotomy of the externi with advancement of the interni, with the object of securing, immediately after the operation, and retaining for a considerable time, decided convergent squint."

An article on

The Toxic Amblyopias, their Symptoms, Varities, Pathology and Treatment,

by Casey A. Wood, C. M., M. D., is a continuation of a previous contribution in Vol 1. It deals especially with Tobacco, Alcohol, and Alcohol-Tobacco Amblopias, and givesa resume of the opinion of recent authors, as well as the results of Dr. Wood's own experience upon the subject. This paper concludes thus:

"When all the symptoms of central amblyopia, due to intoxicants are considered, it ought to be, and as a matter of fact is, easy to detect and differentiate these forms of ocular disease. Uhthoff, thus summarizes the points of *diagnosis between the retro-bulbar neuritis of tobacco and alcohol and that due to other causes* as syphilis, disorders of menstruation, "cold," diabetes, etc. 1. The central scotomata are almost invariably confined to red and green; it is rare to find even blue affected, and almost never yellow and white. 2. The scotomata and visual disturbances are bilateral. 3. Vision does not fall below $\frac{6}{200}$. 4. The form of the scotoma is that of an oval which usually includes and stretches from the fixation point to the blind spot and ties above the horizontal meridian. 5. The vision becomes *gradually* less. 6. The disease affects almost always men. 7. Of more than 40 years of age. 8. *Plain is noticed on extreme ocular movements in the essential retro-bulbar neuritis of women, but is invariably absent in the toxic from.*"

Dr. S. Lewis Ziegler, has a paper on

A Convenient Prism Scale.

After giving to Maddox the credit of first suggesting a "Prism Scale," and also referring to Prentice's Prismometric Scale," he describes his own "Prism Scale" which possesses both a horizontal scale in black, and a vertical scale in red. The prism unit is adjusted for a deviation of two centimeters at a distance of two meters, and the two scales are so joined that the angle of a resultant prism can be easily ascertained. The article, which is well illustrated, concludes with a convenient "Table of equivalent prisms with their resultants" and also a "Table of resultant prisms and their equivalents."

Dr. Black, of Denver, in a paper entitled

Operations upon the Eye for Cosmetic Effect,

makes a stirring appeal to oculists not to postpone operations on the eye, which are purely of a cosmetic character. A divergent squint should not remain uncorrected or a cataract unremoved, because of hopelessness in restoring vision in an eye. A partial or complete leucoma of the cornea should be tatooed to improve the appearance of the eye, and a pterygium should be removed as early as possible, before serious and irreparable danger has resulted to the cornea.

THE VIRGINIA MEDICAL MONTHLY

for September.

Dr. James Kerr presents the report of some of

The Surgical Work at the New Emergency Hospital

of Washington, D. C., during the past year.

In the treatment of wounds it may be said in general that in the emergency room it is antiseptic while in the operating room it is aseptic. In all cases, not already septic, the operations are conducted aseptically, except as far as the skin itself is concerned. Heat is used for sterilizing everything that goes into or near the wound, except the skin of the patient and the operator's hands, which are prepared by scrubbing, alcoholic, carbolic, and sublimate dressings. The precaution is also added of a permanganate and oxalic acid bath for the operator's hands. Sponges are not used, but, in place of them, mops of gauze or cotton. Hæmostasis is accomplished as far as possible by sponge pressure. Before closing a wound it is flushed with a sterilized salt solution. Silk and silkworm gut are used for sutures. In amputation wounds the author states that he has had no occasion to use any form of drain whatever.

The general management of head injuries comprises carrying out exactingly absolute quietude in a darkened remote corner of the ward, with as noiseless surroundings as possible. Purgation and special attention to the condition of the bowels, warmth to the surface and cold to the head, keeping the patient, in all cases where the unconsciousness has been at all deep, several weeks under this treatment. The practice is to elevate in every case of depression with or without symptoms of compression, and explore in all severe head injuries where fracture is suspected. By exploring is meant reflecting the scalp at the site of injury. The author prefers the chisel to the trephine in operations on the skull. In nearly every case the bone was replaced. In one case of septic meningitis the replaced bone was removed and the process arrested by flushing, packing with iodoform gauze and subsequent drainage. Marked improvement speedily followed and the patient recovered. The author earnestly commends the procedure under similar circumstances, and would, from this experience, support the proposition to do a craniectomy in cases of meningitis other than traumatic. He believes that the rapid course and terrible mortality of intracranial inflammations is largely attributable to the unyielding character of the brain case, in relation to the important and delicate organ it contains; and while the cavities of the meninges cannot be treated wholly as the peritoneum can, if we can locate the focus of septic invasion, and as promptly relieve tension, give exit to inflammatory exudate, pack and drain with gauze, we can probably get the same satisfactory results as follow these procedures in the peritoneum and other serous cavities.

In one case of intra- and extra-peritoneal rupture of the bladder, associated with fracture of the pelvis and extravasation of urine into and behind the peritoneum, laparotomy was performed, the bladder stitched laterally to the front of the pelvis to wall off the ruptured part (as the rent itself could not be reached), and the wound treated by the open method by packing the pelvis behind the bladder with iodoform gauze, and draining the bladder and the prevesical space. The patient was threatened with peritonitis following the operation but recovered.

Dr. George Corrie contributes a paper on

Ammonii Chloridum as a Remedy in Cystitis.

The following are some of the conditions in which the drug has been given faithful trial, with most satisfactory results in every instance:

Cystitis dependent upon stone in the bladder; stricture; hypertrophy of the prostate; deposits of urates, etc.; gonorrhœa (male and female).

Cystic irritation from uterine disease or menstrual disorders; malarial effects; masturbation; early pregnancy; simple urethritis (traumatic) in newly-married women.

Cystic and renal sequelæ of la grippe.

In the majority of instances the urine was rapidly cleared of bladder mucus, blood corpuscles, pus corpuscles, etc., the distressing symptoms disappeared, and in no case did the salt solution occasion any gastric or other disturbance. The salt is given in capsules, three or four times in the twenty-four hours, preferably when the stomach is somewhat empty, each dose to be followed immediately by half a goblet or a goblet of cold water. The capsules should be filled shortly before being used as the salt dissolves the gelatine. No explanation of the mode of action of the remedy is given.

Dr. W. K. Gatewood in a paper on "The Modern Treatment of Sprained Ankle" reports a case rapidly cured by the use of continuous applications of hot water and hot fomentations followed by strapping with adhesive plaster.

Other papers in this month's issue are: "Treatment of Appendicitis" by Dr. John W. Dillard; "Practical Observations on the Formulas and Action of Certain Diuretics and Purgatives in the Treatment of Some Forms of Dropsy," by Dr. Joseph Jones; "Injuries to the Eye," by Dr. R. H. Chilton; "Mistakes in Diagnosis," by Dr. R. L. Payne; and "Notes on Sixteen Cases of Atypical (Mountain) Typhoid Fever," by Dr. John F. Woodward.

PERISCOPE.

MEDICINE.

Limited Importance of Albuminuria in the Diagnosis of Bright's Disease.

In a recent address delivered before the Academy of Medicine of Paris, Dieulafoy tried to prove that too much importance is given to albuminuria in establishing a diagnosis of Bright's disease and gauging its gravity, basing his opinion upon observation in sixty cases taken from his hospital wards, and duly classified.

In the first category were included six cases in which death followed all the major signs of uræmia, after having presented most of the minor signs; no albumen, however, had been found at any time, although the post-mortem examination demonstrated the existence of characteristic lesions of Bright's disease.

In a second group he placed certain cases in which albumen was found at certain periods only, outside of which periods it was impossible to diagnose chronic nephritis by searching only for the pathognomonic symptom, albuminuria. Dieulafoy therefore concluded that this symptom had but little value in the diagnosis of Bright's disease. It should only serve to confirm the presence of the disease as corroborative evidence; for being far from trustworthy, it might otherwise lead to a diagnosis of Bright's disease in subjects having had albumen a long time without showing signs of ill health. To avoid having recourse to a symptom proven to be so untrustworthy, this illustrious observer proposes that one should make use of those "minor signs," for the most part unperceived generally, which he was the first to describe under that name in his works on the subject. These minor signs, according to him, serve to indicate the initiatory stage of Bright's disease, the malady itself being characterized by the major signs, such as dyspnœa, cephalalgia, convulsions. He describes, in turn, the symptoms furnished by the sense of hearing, —the buzzing and whistling varieties of tinnitus so frequent in cases of Bright's disease; the strange sign that he designates as the "doigt mort" (dead finger), characterized by a sensation analogous to that produced by putting one's fingers into snow; itching, etc., etc. He also speaks of cryæsthesia, that sensation of feeling cold peculiar to victims of Bright's disease; slight epistaxis in the morning, and also the painful cramps in the legs which only cease on the patient's getting out of bed, are also symptoms to be noted.

Dieulafoy has always found these minor signs of use in the diagnosis of chronic nephritis, and had them controled by measuring the degree of toxicity of the urine of patients; he always found a smaller degree of toxicity than is normal, this serving to prove that the substances to be eliminated by the kidneys remained in the system to gradually poison it.

As to treatment, Dieulafoy considers that milk diet is the only effective means at our disposal. He does not attach much importance to the variations in the quantity of albumen excreted while under the influence of this treatment, as the improvement—the cure, even, of certain patients—is shown by the disappearance of the minor signs, sometimes even by that of the major symptoms. This he has witnessed in two groups of patients where the two pathological conditions were associated,—Bright's disease and chlorosis on the one side, and Bright's disease and syphilis on the other.

He also examined into the matter in which Bright's disease is modified by being associated with gout, chlorosis, or kindred affections. Gout shows itself in the kidneys either by calculi or by nephritis. The kidneys of a gouty subject should therefore be well looked to, as nephritis of an arterial nature is apt to supervene. As to the prognosis, a distinction must be established, in a gouty subject, between the minor signs of Brightism and albuminuria appearing by itself; in the latter case, it is simply a case of gouty albuminuric diabetes, without much gravity.—*Univ. Med. Jour.*

Cerebro-Spinal Meningitis.

F. Klemperer (*Berl. klin. Woch.*) reports three cases of this form of meningitis. Case 1. Woman, aged 18, both of whose parents had died of phthisis, had been ill for three or four days with pain in the head and giddiness. On admission there was stupor, restlessness, and great irregularity of the pulse. The abdomen was indrawn, the neck stiff, and the head slightly retracted. The next day there was vomiting, cutis anserina, and *tache cerebrale*. Two days later the stupor was marked, the pupils retracted sluggishly, and labial herpes was present. The pneumococcus was cultivated from the herpetic vesicles, but its virulence was shown experimentally to be slight. The next day the meningeal symptoms were more marked, and there was epistaxis. From this time the patient began to improve, and was discharged completely well about a month after admission. Case 2. Woman, aged 29, began to ail four weeks before admission with pain in the joints. and, later, in the right side of the chest, Exploratory puncture here yielded clear fluid. On February 24th there was some stupor, headache, pain and stiffness in the neck, and a rise of temperature. February 25th. There was vomiting, restlessness, and tremulous movements in the face muscles. On February 27th the pulse was irregular and herpes appeared. Next day there was Cheyne-Stokes breathing. The fundus oculi, as in the preceding case, was healthy. Later the left pupil was less than the right, both reacting sluggishly. From March 10th there was slow improvement, ending in complete recovery. Case 3. A girl, aged 16, whose father had died of phthisis, became suddenly ill three days previously with fever, vomiting, and pain in the back. On admission she was apparently unconscious and very restless. There was great rigidity of the neck, clonic spasm in the left arm, and later, weakness in the right side. On the sixth day, herpes appeared, from which diplococci were obtained. She died on the eighth day, and pneumococci were cultivated from the meningeal exudation. There was no tubercle anywhere. In all three cases many things appeared in favor of meningeal tuberculosis. The author discusses the relation of labial herpes to herpes zoster, and he says that the identity is not yet established. He has investigated bacteriologically the fluid from fourteen recent and five older cases of labial herpes. He thinks that this herpes represents a special localization of the original disease, or that when it is the expression of a mixed or secondary infection it seems as though an ordinary and non-specific cause acts as the etiological or complicating factor. The author thinks that labial herpes justifies the diagnosis of a non-specific or so-called epidemic meningitis as against the tuberculous form. He admits that there is much that is hypothetical in this idea, and that a single case of tuberculous meningitis with herpes would overthrow it, provided that a mixed infection was rigidly excluded. Herpes may accompany the suppurative meningitis of the tuberculous, but not pure meningeal tuberculosis. Recovery is more probable if the meningitis be of the simple kind and not tuberculous.—*Br. Med. Jour.*

The Staphylococcus in Osteomyelitis.

Bommers (*Deut. med. Woch.*) June 8th, 1893), has succeeded in cultivating the staphylococcus albus from the blood obtained with the usual precautions from the finger in a very acute case. Both bouillon and glycerine agar tubes showed abundant growth, and pure cultures were obtained. It is remarkable that in a case of the most acute osteomyelitis (acute necrosis) the experimentally but slightly virulent S. pyogenes albus should be present.

SURGERY.

Frequency of Sequestra in Tuberculosis of Large Joints; Treatment of Joint-Tuberculosis.

Riedel, of Jena, has written on the frequency of sequestra in tuberculosis of the large joints, with observations on the treatment of joint-tuberculosis. Tubercular foci in bones, when no sequestra are present, often heal spontaneously; but the presence of a sequestrum renders healing impossible, unless the sequestrum be removed; hence statistics throwing light on the frequency of sequestra are of the utmost importance. Riedel reports 314 cases of tuberculosis of the six large joints, in which the disease began in the capsule in 32 per cent. and in the bones in 68 per cent.; 67 per cent. of the latter presented sequestra, and in 33 per cent. sequestra were present. Hence, out of 314 cases 45.55 per cent. were devoid of sequestra. If to the above 34 cases of tubercular foci near the large joints are added, the total number is raised to 348, of which 48 per cent. had sequestra. As regards individual joints, in 88 cases of coxitis, 70 per cent. had sequestra; in 116 cases of tuberculosis of the knee-joint, 37 per cent.; in 39 cases of tuberculosis of the ankle, 38 per cent.; in 10 cases in which the shoulder-joint was affected, 50 per cent.; in 48 cases of disease of the elbow, 31 per cent.; in 13 cases of disease of the wrist, 15 per cent.

The tubercular process began more frequently in the bone than in the capsule, as is markedly shown in the hip-joint (84 per cent.). An interesting point relates to the frequency with which the disease begins in the different bones of a given joint. In the hip, for instance, the author determined that in 66 cases with sequestra the primary focus was in the acetabulum in 70 per cent., in the head and neck in 20 per cent., and in the head and acetabulum in 6 per cent., leaving 4 per cent. undetermined.

According to the foregoing figures, the best chances of recovery without operative treatment exist in tuberculosis of the elbow, followed by the knee, and then the ankle. The hip-joint, which is most often treated by conservative methods, offers the least chance of success; so that very few cases are permanently cured by injections, etc. In spite of these statistics, however, the operative treatment of the other joints gives such good results that Riedel would advise its continuance.

The author prefers to operate through longitudinal incisions, especially where cavities are left. These incisions are tamponed and not sutured. Any cross-incisions which may be necessary are united by catgut. The resulting scars are just as good as if the incisions had been closed, and healing in the depths of the wound takes place with greater rapidity and certainty. He speaks strongly against the tuberculin treatment.

In the following statistics from Achen only those cases are designated as cured which were discharged without fistulæ. The total number was 137. Of these 75 per cent. were cured; in 13 per cent. fistulæ remained; subsequent amputations were made in 3½ per cent., and 8½ per cent. died. In 49 resections of the hip-joint there resulted 62 per cent. of cures. Owing to the resulting shortening, the author would be glad to discard resection of the hip; but, seeing that injections of iodoform are particularly useless in this joint, there remains nothing else. He has succeeded, however, in several cases, in removing the capsule and leaving the head of the bone in place. This is best done by means of a transverse incision. After 40 years of age, and even earlier, exarticulation is recommended.

In 51 cases of resection of the knee with extirpation of the capsule, 88 per cent. of cures resulted. As with the hip-joint, Riedel regards the fortieth year as the limit of time in which resections should be made.

In 14 resections of the ankle there were 78 per cent. of recoveries. It is best to operate as soon as the diagnosis is made. Riedel prefers Konig's method.

In 16 resections of the shoulder, 12 were cured.

In 4 resections of the wrist, 3 were cured. As in the ankle, an operation should be made as soon as the diagnosis of tuberculosis is established, without reference to the age of the patient.

Riedel recommends iodoform injections in abscesses appearing above Poupart's ligament which result from caries of the vertebræ; also, in hydrops tuberculosis, and in old persons where it is advisable to temporize. He speaks against the employment of injections in younger individuals.

It is best to operate before the fistulæ appear, because infection with puscocci is apt to cause such intimate adhesions between the surrounding tissues and the tubercular disease that it is at times impossible to effectually remove the latter. A reason for operating early in the disease is that delay exposes the patient to the danger of the development of tubercular processes in other portions of the body.

Sahli, of Langenthal (*Corres. f. sch. Aerzte*, March 15, 1893), writes on the use of iodoform injections in tubercular diseases of bones and joints. The best of all preparations is that employed by Tubingen in which sterilized olive-oil is thoroughly impregnated, by prolonged shaking, with 10 per cent. of iodoform; 4 per cent. dissolves and 6 per cent. remains in suspension. The mixture will readily pass through a reasonably small needle, and an ordinary hypodermatic syringe may be used. It is well to partially withdraw the needle and re-insert it, so as to deposit the iodoform in several different foci. There is little doubt that the effectiveness of the treatment lies in the liberation of small quantities of free iodine by the gradual action of the fluids of the body. Sahli, contrary to the advice of Bohny, often injects as much as 2 grammes of iodoform-oil at a time, and has never produced symptoms of intoxication. Pain or inflammation hardly ever follows, and cold compresses, etc., are unnecessary.

During four or five weeks the injections should be made twice a week; and then, for the same length of time, once every one or two weeks. The patient should then be carefully watched for some time. In severe cases the treatment must be continued much longer, and the individual should not be lost sight of for at least six to twelve months. Improvement should begin after four or five injections, but care must be taken not to stop the treatment too soon.

Sahli would recommend the treatment of *all* cases of tubercular disease of bones and joints by iodoform injections, with the exception of those presenting large abscesses, extended destruction of bone, and multiple fistulæ, which are better suited for amputation. If nothing is accomplished, at least no harm will be done. The process is especially adapted to the after-treatment of cases which have been curetted. The elbow- and the hip-joint respond best and most quickly.

Sahli combines with the injections the creasote treatment, local *massage*, extension, etc., where indicated. He lays much stress upon strict asepsis in connection with the iodoform injections.—*Centralblatt fur Chirurgie*, February 18, 1893.

Operations in the Vertebral Canal.

Urban defines the indications for operations in the vertebral canal as follows: 1st. Vertebral fractures with pressure upon the spinal cord. The operation is not to be undertaken immediately after the injury, but should be postponed until the beginning of consolidation, as it would be extremely difficult in the beginning to firmly set together the broken parts. The proper time, varying with circumstances, would be from the fifth to the eight day, if by that time the symptoms are not on the mend; if after the twelfth week there should be no improvement, the operation should undoubtedly be performed. 2d. New formations in the vertebral canal. 3d. Spondylitis tuberculosa, after the process has remained stationary during at least several months, and no abscesses are suspected. 4th. As an exploration measure in all cases in which symptoms of localized pressure on the spinal cord are shown, after which, according to what is disclosed, the operation may be completed.—*Verhandlungen der Deutschen Gesellshaft fur Chirurgie*, Bd. xxi.

A New Method of Cuttiug Æsophageal Stricture.

Abbe describes a new method of dividing cicatricial stricture of the œsophagus, which he practiced with very good results on a patient aged 30. After the performance of gastrostomy, a digital examination is made of the lower œsophageal orifice, and a small conical gum-elastic bougie is guided into the canal by the finger. A string of heavy-braided ligature silk is carried from the stomach to the mouth by passing a very small bougie through the œsophageal stricture. In the case reported by the author, the upper end of the string was brought out by the neck through a wound which had been made in an unsuccessful attempt at external division of the stricture. A larger bougie is now passed from the stomach alongside the string, and pressed tightly into the stricture so as to stretch it. The string is now drawn upward by the fingers, passed to the back of the patient's mouth, and the bougie will be felt to advance at once as the string makes its way into the tense stricture. Larger bougies are now passed, and the string is "see-sawed" upwards and downwards. When the largest size has been passed, a rubber tube of corresponding size is drawn through the œsophagus past the point of stricture, its lower end remaining outside the wound in the stomach. A smaller tube is passed into the stomach for nourishment. The patient can thus drink water for refreshing the mouth, and swallow saliva without contaminating the wounded surface, which the tube also serves to keep dilated. The large tube may be removed on the second or third day, and dilating bougies be introduced by the mouth after the fourth day. Finally the gastrostomy wound may be closed, whenever the patient has gained strength, by a plastic operation.—*Medical Record.*

OBSTETRICS.

Gonorrhœa and the Puerperium.

Kronig (*Centralbl. f. Gynak.*, No. 8, 1893) has studied the development of gonococci in nine women after labor. The germs are easily found in the lochia. It is certain that in women with vaginal gonorrhœa the disease may extend into the uterus during the puerperium. Gonorrhœal infection of the uterine cavity may also set up fever even when there is no trace of mixed infection, no other germs being present. Gonorrhœal infection in the puerperium is not of direct danger to life, but frequently leads to complications late in the puerperium, the disease progressing from the endometrium to the tubes. Two cases of this kind were recorded. The first, after the usual careful routine treatment, left the hospital on the fourteenth day. Two weeks later she returned. A perimetric exudation was detected to the left of the cervix. The second case was graver. On the fourteenth day the temperature rose to over 103°, the right elbow became painful, and effusion into the extensor tendons of the right hand occurred. During the third week right parametritis set in, the temperature rising to 104°. Then the pain and parametric swelling subsided. The fluid from the tenosynovitis was sero-purulent but free from germs.

Unconscious Delivery.

Le Blond (*Jour. de Med. de Paris*, July 30th, 1893) related in July a remarkable case before the Medico-legal Society of Paris. A woman, aged 27, who had been seduced and deserted, was seized with slight colicky pain, but continued to work. In the course of the following night she was attacked with still more severe pain. Thinking that an action of the bowels would give relief, she sat upon her chamber utensil; on straining a live child was born. This alarmed her greatly, but she cut the cord with scissors, wrapped the infant in a cloth and walked downstairs, telling the people in the house, in fear and trembling, what had happened. Violent flooding set in. The cord had not been tied. Early in the morning Le Blond saw the patient, and found the placenta still in the vagina. He extracted it. The mother and child did very well. Had the child died the mother would have been very strongly suspected of murder, especially if she had attempted to defæcate in a public privy, in which case the child would almost inevitably have been killed.—*Br. Med. Jour.*

Fœtal Peritonitis Severing the Intestinal Canal.

Mackenrodt and Keller (*Centralbl. f. Gynak.*, No. 28, 1893) read, at a recent meeting of the Berlin Obstetrical Society, cases of death of infants, one week old, from intestinal obstruction. In Mackenrodt's cases, the infant died at the end of a week, after vomiting fæces for two days. The abdominal cavity showed all the signs of chronic peritonitis, free adhesion of intestine, indurated patches, etc. The peritoneal cavity was full of yellow fæces which had escaped through a larger perforation, with sloughy edges, in the small intestine. A circular band of dense inflammatory deposit completely surrounded and obstructed the small intestine in the middle of its course, and had broken the continuity of the intestine through atrophy. The proximal side of the alimentary canal was greatly dilated. The lumen of the severed distal part was very small, nor could the ileum be distinguished from the colon. The mother had borne five healthy children, and showed no signs of syphilis. Keller's patient was a male infant; it vomited all its milk in whatever way administered. It died at the beginning of the second week. The appearances were as in Mackenrodt's case, excepting that there was no perforation, and that the closed severed ends of the small intestine were smooth. He believed that the peritonitis was the primary disease in both case. It had hindered the development of the intestine. Olshausen disagreed with this theory, believing that the malformation of the intestine was the cause of the peritonitis.—*Br. Med. Jour.*

GYNECOLOGY.

Spontaneons Amputation of an Inverted Uterus.

Hutson (*Archives of Gynæc.*,) relates a case in which the patient was a mulatto aged about 35. She had aborted several times and never carried a child to term. A negro midwife attended her and delivered the child and placenta "naturally," after the custom in South Carolina, the patient being placed in a kneeling position before a chair, whilst uterine contractions were stimulated by shaking her up and down. When the patient got up to go to stool the uterus came down. She lay for three days longer on a filthy mattress in hot weather. Huston was then called in. She was in an unconscious condition, the abdomen being enormously distended, while a putrid pulpy mass protruded from the vagina. It was the inverted uterus which had virtually amputated itself by the contraction of the cervix upon the ligaments and tubes. The sloughy organ was removed and the vagina plugged with gauze smeared with carbolized vaseline. The patient, who at the time seemed to be dying, made a good recovery.

Conservative Operation on the Ovaries, Tubes and Uterus.

A. Martin (*Deut. Med. Woch.*, 1893) draws attention to the importance of this subject. (1) Resection of the ovary. Ovarian disease is very frequently bilateral, but sometimes circumscribed cystic disease may be found in other ovary. The question arises as to whether the whole organ should then be removed. It certainly should be if there is no healthy ovarian tissue left or the process be a suppurative one, but in some other cases it may not be necessary to remove it. The author refers to 27 such cases with one death; two of these relapsed, and of the 24 remaining ones eight bore children. Ignipuncture has been employed, but the author is satisfied with incision and stitching up. (2) Resection of a stenosed tube, the other being removed for disease. Here it may be more difficult to recognize the character of the disease. The contents of the tube must be most carefully looked to. If the contents be turbid or unmistakably purulent or if the mucous membrane be ulcerated, the tube must be removed; otherwise resection with the formation of a new ostium may be practiced. If any doubt exists, the whole appendage must be taken away. Of 40 cases, with two deaths, only four were not cured or considerably improved. Only one became pregnant, but 12 were unmarried, and the husbands of some others were neurasthenical or had had gonorrhœa. (3) Enucleation of myomata. The older the patients the more likely are myomata to be multiple. In 141 cases of intraparietal myomata, 26 died but this includes the period of development of the *technique* of laparotomy; of the last 20, only one died. Of the 115, only four relapsed (three per cent). The author has not found any difficulty in stitching up the bed of the tumor, nor has any unpleasant hemorrhage occurred. Only two of these patients became pregnant, but other causes of sterility may exist. The author concludes (1) that the conservative operations do not present any materially greater risk than radical ones; (2) that women are thus relieved of their troubles in by far the greater majority of cases; (3) that relapses are exceptional; (4) that the female functions persist; (5) that child-bearing is possible; and (6) that child-birth then takes place without any special risk.—*Br. Med. Jour.*

NEWS AND MISCELLANY.

Board of Health Resign.

Four or six members of the Columbus, Georgia, Board of Health including the President, Dr. Ticknor, resigned because the city council refused to pass the ordinance of quarantine against Brunswick.—*Jour. Amer. Med. Ass.*

The Holy (Cholera) Well at Mecca.

Mr. E. Frankland, writing to the London *Times*, on the condition of the water of the holy well of Zem-Zem, used by the Mahometan pilgrims at Mecca, says: A sample of the water came to me through the India Office. It was full of dead microbes and contained, in an equal volume, considerable more animal matter than is found in average London sewage. In addition, it afforded evidence of previous pollution with an amount of such matter at least six times as great as that contained in an equal volume of average London sewage. The water has been again, quite recently, analyzed by Colonel Bonkowski Bey, consulting chemist to his Majesty the Sultan of Turkey. His results confirm my own analysis. They show that the water is still abominably polutted by excrementitious matters. The surroundings of this well are such as would be likely to impart to the water these dangerous ingredients. Mecca appears to have no sewerage system; all foul matters being buried in the earth within or near the city. Hence the foulness of the water percolating into the well through this mass of corruption. Colonel Bonkowski Bey informs me that Mecca is supplied with water of excellent quality, but, of ;course, the pilgrims are bound to drink at the holy well. Tens of thousands of pilgrims continue to die of cholera at Mecca and to spread the disease elsewhere; but, so far as I know, no measures have been taken to prevent pollution, and Mecca continues to be a cholera center.

ARMY AND NAVY.

U. S. ARMY FROM SEPTEMBER 17, 1893, TO SEPTEMBER 23, 1892.

1st Leiut. Charles F. Kieffer, is relieved from further duty at Fort Meade, S. P., and from temporary duty at Fort Yellowstone, Wyo., and will report to commanding officer at Fort Assinniboine, Montana, for duty.

1st Lieutenant William F. Lewis, Assistant Surgeon, will upon being relieved from duty at Fort Assinniboine, Montana, by Lieut. Kieffer, report to commanding officer Fort Apache, Arizona, for duty.

1st Leiut. Benjamin Brooke, Assistant Surgeon, will proceed at once from Fort Leavenworth, Kansas, to Fort Brady, Michigan for temporary duty duringthe absence on leave of Assistant Surgeon Paul Clendenin, U. S. Army.

Leave of absence for one month, to take effect upon the arrival of Assistant Surgeon Benjamin Brooke, is granted Captain Paul Clendium, Assistant Surgeon U. S. Army.

Captain Curtis E. Price, Assistant Surgeon, relieved from duty at Fort Wadsworth, N. Y. and ordered to report to the commanding officer, Fort Ponter, N. Y. for temporary duty at that post.

Captain Wm. C. Shannon, Assistant Surgeon, is relieved from duty in the office of the Surgeon General of the Army, and as assistant to the attending in Washington, and will proceed to N. Y. City and report in person to the Commanding General Department of the East for duty as attending surgeon and examiner of recruits in that city, relieving Captain Guy S. Edic, Assistant Surgeon.

Captain H. S. T. Harvis, Assistant Surgeon U. S. Army, is relieved from duty at Fort Kiogh, Montana and assigned to duty at Fort Preble, Maine.

Captain M. W. Wood, Assistant Surgeon U. S. Army, is relieved from duty at Fort Preble, Maine, and assigned to duty in Boston, Mass. as attending surgeon and examiner of recruits.

Captain Francis J. Ives, Assistant Surgeon ordered to proceed from Fort Sheridan, Ills. to Chicago, Ills. and report to Captain Louis A. La Garde, Assistant Surgeon, in charge of the medical section of the War Department exhibit World's Columbian Exposition, for temporary duty.

Captain Guy L. Edie, Assistant Surgeon, upon being relieved from duty in N. Y. City, by Captain William C. Shannon, Assistant Surgeon, proceed to Washington D. C. and report in person to the attending surgeon for duty in his office.

Captain Wm. G. Spencer, Assistant Surgeon is granted six (6) months extension to sick leave of absense granted, in Special Orders, No. 108 A. G. O. May, 13, 1893.

Captain Louis Buechemin, Assistant Surgeon, is granted twenty-three days leave, to take effect about September 17, 1893.

Major Aenry McEldervy, Surgeon U. S. Army, is granted leave of absence for one month to take effect about October 1, 1893.

Lieut. Champe C. McCulloch, Jr. Assistant, Surgeon, is relieved from duty at Fort Sam, Houston, Texas, and ordered to Fort Ringgold, Texas, for duty relieving Capt. James E. Pitcher, Assistant Surgeon. Captain Pitcher, upon being relieved, ordered to Fort Niagara, N. Y., for duty relieving Captain Reuben L. Robertson, Assist. Surgeon Capt. Robertson, upon being relieved, ordered to Fort Omaha, Nebraska, for duty.

Leave of absence for one month, to take effect on or about October 1, 1893, is hereby granted Leiutenant Colonel J. V. D. Middleton, Deputy Surgeon General U. S. Army, with permission to apply for an extention of fifteen days.

Captain Lewis A. L. Garde, Assistant Surgeon, will at the completion of his duties in connection with the World's Columbian Exposition, report in person to the commanding general Dept. of the Colorado, Denver, Colorado, for duty as Attending Surgeon and Examiner of recruits in that city.

1st Lieutenant Harry R. Stiles, Assistant Surgeon, is relieved from duty at Fort Omaha, Nebraska, and will report in person to the commanding officer, Fort Meade, South Dakota, for duty at that post.

By direction of the Secretary of War, the leave of absence granted Captain Charles E. Woodruff, Assistant Surgeon, is extended four months.

The leave of absense granted Captain Junius L. Powell, Assistant Surgeon, is extended ten days.

Leave of absence for one month is hereby granted to Major J. Van R. Hoff, Surgeon U. S. Army.

Leave of absence for one month, to take effect about the 5th instant, is granted Col. J. C. Baily, Asst. Surgeon General.

Leave of absence for one month, to take effect between the 25th instant, and the 5th proximo, is granted Major Charles L. Heizmann, Surgeon, Fort Douglas, Utah.

THE MEDICAL AND SURGICAL REPORTER.

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ORIGINAL ARTICLES.

"SUGGESTION" IN THE CURE OF DISEASE.*

J. T. AXTELL, M. D., Newton, Kas.

The word "suggestion," as here used, is meant in the same sense as where used by writers on hypnotism, and may be best understood by a history of some cases in practice.

Mrs. D., aged twenty-six; married five years; two children; family history neurotic; was in fair health until three years before this history begins, when, after the loss of a child she became an invalid and went to bed. She complained of pain in her left side just below the ribs and some times extending down into the pelvis, but was not sensitive to pressure. After careful examination no organic disease could be found. She would lie always in one position on her back, with several pillows under her head and the head drawn forward on her chest. Her arms rested on the elbows, with the right hand open and the fingers held straight, while the left hand was open but strongly flexed at the wrist. All the muscles of the body were held rigid, and she would lie in this position for days at a time without moving except when compelled to do so. She did not feed herself nor take any care of her person. The urine dribbled away as it formed and the stools were not always controlled. She was not pleased to be told she was looking well and would never admit that she felt better. Her appetite was good and she was very well nourished. She had many little whims—she could not talk if the door of the room stood open, and, in having her face washed, a certain number of motions must be made in just certain directions,—and she would become very angry if things were not done as she wished. When asked a question it would take her a long time to begin to answer, not because she did not know what answer to make, but apparently because she could not get her muscles to act. When she did speak it was in a very high pitched key and in a jerking manner. She said it hurt her side to talk low, and it hurt her side to take any other position—everything was accounted for by the pain in her side. She did not want to get out of bed and she did not expect to get well. She was sure no one could cure her and she did not seem to care to be cured. There was some loss of mental power, although she seemed quite rational on all points except that she thought she could do nothing and that she suffered a great deal of pain.

I decided to try the effect of "suggestion" alone, and for that purpose took her into my private hospital. At first I hypnotized her every day, and when under that influence her muscles would relax and she would get up and walk with a little help. I would say to her, "Now you can walk—your arms are limber now—you can get them above your head—you can hold your head up straight—your side does not hurt you any more. I have taken the pain all away—you can talk easily now."

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* Read before Western Association of Obstetricans and Gynecologists, 1892.

When hypnotized she would do just as I suggested and believe just what I told her. After a few weeks it was not necessary to hypnotize her, but I made the same suggestions and she would obey in the same way. She soon learned to walk, to feed herself, to control her urine and her bowels and to take care of her person and of her own room. She stopped complaining of her side, wrote a great many letters, talked quite well and was able to go to her home in Texas.

A similar case was Miss N.; aged thirty-four; family history good; from childhood had not been strong—who complained of a great deal of pain through the chest and about the heart. For many years she was obliged to spend months at a time in bed,and, at the time I saw her, she had been confined to her bed for two years and seven months. She had cramping spells in which the hands would clench anything within reach. The muscles would all become rigid and the head would be drawn down on the breast or, at times, thrown backward. A dry spasmodic cough often seized her. Her cramping and coughing spells were terrible to see.

After one of these attacks she would lie exhausted and unable to speak for a time. No organic disease was found, and treatment by suggestion was begun at the hospital. Her pains could all be relieved immediately, and she could get up and walk, although, from their long disuse, her limbs were very weak. The pain would be relieved, at first but a short time, but it staid away longer after each trial. It was soon found unnecessary to hypnotize her to relieve the pain. All that was necessary was to say, "I will take that pain all away," and laying my hand over the pain would say, "now it is gone—you have no more pain," and to the surprise of the patient herself she would be free from pain. Although it is now less than three months since treatment was begun, she gets up alone, walks to her meals, takes care of her own person, attends to the calls of nature alone, and from being a constant care night and day, she is a very independent person and is gaining strength rapidly.

Obstetrical cases are peculiarly amenable to this treatment,and I will cite one case: Mrs. M., aged thirty; primipara; labor pains very severe and fifteen minutes apart; presentation normal but no dilatation of os uteri. I told her labor would be very slow but I could put her to sleep so the pains would not hurt her. She proved an excellent subject, and, although the contractions came regularly, she said there was no pain about it, and she lay as if about half asleep. I hypnotized her about every six hours for three days, when I delivered her with forceps, and that operation was almost painless. The effect of the suggestion would seem in this case, to wear away in about six hours and have to be repeated.

I never use the words "mesmerize" or "hypnotize" to a patient, but simply say "I can put you to sleep and relieve that pain," and it must be said earnestly and with confidence. The patient is told that, if he will look intently at what I show him and keep his mind fixed on one thing, such as going to sleep—which he may repeat over and over to himself—in a few minutes his eyes will become heavy and he will not be able to hold them open, but they will close and he will fall asleep and then I will relieve all pain. In this way he is expecting just what you wish and, if you have his confidence, in a large percentage of cases you will succeed. A lead pencil is held about six inches in front of the eyes and when you see the effect of the eye strain you may say, "your eyes are getting red, they are beginning to water, the lids are getting heavy, you are getting sleepy—so sleepy, your eyes are going shut, you can not hold them open" and you keep suggesting just at the right time until you will see the pupils suddenly dilate, the eyes will close, and with a little tact the patient is under your control and you can relieve all pain.

I have often been surprised at the effect of the same suggestion when the patient was not hypnotized. Who has not used a placebo and seen it have just the effect suggested? It is well known that a hypodermic injection of water will often relieve pain, especially when a patient has been relieved by morphine used in this way. Our country is full of ignorant men who call themselves "Magnetic Healers," and if there was no demand for them they would have to go out of business. It is certainly true that they relieve pain and often encourage patients through long spells of sickness, such as typhoid fever, and they relieve many cases of so-called paralysis, yet their only stock in trade is "suggestion." The christian scientist and the faith healer, although following slightly different methods, get their influence in the same way. If they can have some success, how much more can be accomplished by an intelligent physician who knows the laws of hypnotic suggestion and who knows when to apply them.

Obstetrical cases are good ones for the practice of suggestion, because usually there is rest enough between pains to get the patient's mind fixed on one thing, which is difficult to do while a severe pain lasts. I often find it better, in hypotizing a patient in severe pain, to first use a hypodermic injection of morphine and to follow it by suggestion, but this is unnecessary for a patient who has been often hypnotized. Undoubtedly the best effects of suggestion can be obtained on patients hypnotized, but very much can be done without this.

The objections to hypnotism are the unsavory reputation one is likely to gain by practicing an art not well understood in which so much influence is obtained, and, also, the length of time required.

To prepare a patient for a case of confinement or for a surgical operation, she should be hypnotized several times a week until it can be well done. It is always best to *do* something or to *give* something to make it appear reasonable to the patient that your words be true. It is not difficult, usually, to cause a nervous patient to have a certain number of hours sleep by giving a powder of bismuth, and at the same time suggest, *often* and *earnestly*, that it will surely have this effect. I sometimes wonder what pain *is* that it can be relieved by such means. I often tell a patient while hypnotized that at a certain hour the next day, or the next week, he will do some certain thing, and at just the hour stated he will do it. Yet before the time comes he cannot tell anything about it, and after it is done he cannot tell why he did it. The thought comes to him just as any impulse may come.

How many of our acts and beliefs may be due to unconscious suggestion? And how much physicians may accomplish by it none of us can tell, but surely it is a remedy of great power and needs further investigation.

COMMUNICATIONS.

UTERINE COMPLICATIONS, THEIR TREATMENT AND MISTREATMENT.*

P. C. PALMER, M. D., Kansas City, Mo.

The subject selected may be threadbare, yet the fabric is of sufficient integrity to justify the attempt to construct an article of perhaps some value from the remnant.

I shall pay particular attention to displacements of which we have a varied host, as regards the degrees of position:

First, *Versions* as theorized by our predecessors and the majority of gynecologists of the present day.

Second, *Flexions*.

Third, *Prolapsus*.

I assert that ante-version is a misnomer and release it from my category. Retro-version, the flexions and prolapsus we find in their varying phases, distinct and complicated. Retro-version being of comparatively slight importance, when uncomplicated, I shall not dilate on. It serves only as a stepping stone to worse troubles.

Though I assume all gynecologists are conversant with the different displacements, the different degrees of position are important as regards their effects and complications and merit due attention.

It is quite common to meet with cases where the fundus is so flexed as to rest on the bladder, pressing hard thereon, the os in its normal position, pointing backward at different degrees, and in some cases, pointing forward in a magnet shape, or even bent upon itself.

Next we find retro-flexion, in all the varying degrees which characterize ante-flexion, the fundus pressing the rectum to a greater or less extent, the os pressing on or near the bladder, down and forward at different angles, or backward, forming again the horse-shoe, or tightly flexed upon itself.

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* Read before the Western Association of Obstetricians and Gynecologists, 1892.

The flexions not uncommonly take on the form of inversion, while more rarely, adhesions, or other causes, bring about lateral displacement.

Finally, the worst of the displacements is prolapsus, particularly when complicated with one or more of the other forms.

As regards causes for any of these conditions it would be an unpardonable infliction on your time and patience to attempt an explanation, there being nearly as many causes for these abnormalities as there are females suffering from the effects thereof.

With rare exceptions, by the time a flexion exists, or before, we have inflammatory troubles, an endometritis perhaps, but usually more extensive invasions have been made in the uterine tissues, and in the adjacent parts.

The cause and duration of any of these difficulties must largely determine the extent and physiological changes, and the resulting complications.

Although the flexions differ somewhat as regards position, they produce in their general effects a marked similarity, locally and constitutionally. To illustrate, an anteflexion, causes practically the same tension on the natural supports of the organ, and the same mechanical pressure, considering the degree of flexion, on the other pelvic organs, nerves, etc., as does the retoflexion.

With this exception, however, the former produces a more serious effect on the urinary organs, and the latter a correspondingly greater effect on the rectum with a resultant tendency to constipation.

These two points, while not infallible, are an excellent guide in diagnosis, when an examination is denied us, or previous to making the same.

Adding to this schedule of abnormalities, inversions, stenosis, elongated cervix and subinvolution, we have an expansive foundation for a list of complications which follow in variations most multitudinous:

Constipation.
Incontinence.
Cystitis.
Vaginitis.
Cellulitis, Peritonitis.
Metritis, Endo- and Perimetritis.
Salpingitis.
Ovaritis and inflammation of the relative parts.
Adhesion.
Ulceration.
Abscess.
Hysterorrhœa.
Granulations.
Amenorrhœa.
Dysmenorrhœa, Vicarious Menstruation.
Menorrhagia.
Menorrhœa.
Neuralgia and other neuroses.
Abdominal, pelvic, lumbar and other reflex pains.
Headache, Vertigo.
Melancholia, Nervousness and Hysteria.
Anæmia.
Leucorrhœa.
Acquired pulmonary consumption.
Pregnancy, Abortions.
Extra Uterine pregnancy, Hæmatocele.
Fibroids and other Tumors, such as Sarcoma.
Intraligamentous, Multilocular, Unilocular and Dermoid Cysts.
Cancers.

In tabulating this list of complications I do not in the least exclude the possibility of other difficulties producing symptoms and conditions which resemble those of uterine origin, any more than I would assert a woman has no organ but the uterus which disease may attack. Many of the difficulties above enumerated exist independently of those under consideration.

We may meet with almost any number of fibroma and myomatous tumors in an individual case, and strange to say the number does not increase the danger, for when a large number exists they are small. The single one being most mischievous. They grow slowly unless some complication arises, and stop at menopause, growing smaller, as a rule, thereafter.

The negress is more liable to these tumors than white women.

There is a close connecting link between these and sarcomatous and other malignant tumors which grow in the same locations. Any tumor which grows rapidly should be looked upon with suspicion. Cancer is the most fatal of all. Of this we may find any form save the scirrhus in the uterus.

The treatment must largely be peculiar to the individual case in hand, as each presents conditions essentially its own.

First and most important, is to correct the abnormalities in the most rational and conservative manner the case demands, whether it be by medicine systemically or locally, or by instrumental or surgical assistance.

To relieve suffering should be our first effort. Restore abnormalities to normalities, as best suits the individual case.

To express myself more definitely let me cite one case. Mrs. C.; married 18 years; three children; after allowing her troubles to grow constantly worse for fifteen years, presented on examination a marked retroflexion, the ulcerated of pointing backward as far as the subinvoluted condition would permit, producing a closed magnet shape of the organ ; strong general adhesions ; ovaries three times the natural size ; the tubes greatly enlarged, indurated and tortuous, and general inflammation, cellular and peritoneal as well.

The slightest touch to the excoriated vagina was unbearable, to say nothing of the pain produced to the other inflamed parts, by gentle pressure, externally and internally. Constipation amounting almost to impaction, was of long standing. In short, every function of the body was disordered to an alarming degree. Seemingly a laparotomy was inevitable, but knowing their aversion to anything surgical I was forced to try other methods.

I used hot fomentations ; hot vaginal and rectal injections ; opiates and other systemics; local applications in the uterus; electricity ; elevating the fundus and retaining the position as far as gained by cotton tampons medicated, and as rapidly as possible as treatment progressed, breaking down the adhesions by instrumental and digital pressure. Though an early and continued improvement was manifest, many weeks elapsed before the patient could leave her bed. Soon after doing so, however, some indiscretion on her part in the way of work, brought on a serious relapse, from which, as would be expected, she improved more slowly than at first. Now, after eight months, she is around the house attending to household duties ; riding out in suitable weather ; suffering no pain ; the ovaries subsided to normal size ; no adhesions remaining ; constipation relieved ; appetite good ; skin clear ; is rapidly gaining flesh and the uterus is normal in position and size.

Ordinarily a laparotomy is to be urgently advised for the more speedy relief of cases of similar severity, and for the removal of abnormalities. Yet, as we know, nature can and does accomplish wonders, and we do well to imitate and assist nature as far as possible.

In the treatment of uterine displacements I *never* use a pessary, save in prolapsed or complicated cases, and *never* did.

In cases free from leucorrhœa or nearly so after improvement by treatment, instead of absorbent cotton I use antiseptic wool for tampons. This can be worn with as much comfort to the patient as cotton, and much longer—from three to five days or even more.

I almost always use electricity in any form of displacement, for more reasons than one; first, to shorten and strengthen the weakened and unnaturally lengthened ligaments and cords; second to assist, as it does, the stimulation to a healthier action, of natural tissues, and hastening the absorption of unhealthy or diseased parts.

Suturing for the retention of the uterus in overcoming flexions I call mistreatment, for certainly we gain our best ends by imitating nature. Naturally there are no adhesions, and, save in rare cases, producing this condition is a result to be avoided.

I briefly summarize the *mistreatments:* Of constipation is to continually dose the patient with cathartics without the removal of mechanical pressure or other obstructions.

Of incontinence in neglecting to relieve pressure and irritation and strengthen the muscular portion of the bladder, sphincter and urethra.

Of cystitis in neglecting to use hot fomentations, counter irritants, irrigation with hot boracic acid solutions, and diuretics, of which Apis melliflica is the chief.

Of vaginitis in neglecting hot water injections and soothing and astringent applications.

Of reflex troubles in treating symptoms instead of eradicating the disease.

Of dysmenorrhœa in relying on opiates, teas, hot slings, "goose grease and molasses."

Of leucorrhœa by using suppositories and vaginal capsules and other devices of doubtful origin and efficacy, leaving the uterus, the seat of the difficulty, unnoticed and untouched.

Of cellulitis and other inflammations of the pelvic organs in doing without counter irritants, hot fomentations, alteratives and intrauterine and vaginal applications.

Of lacerations, occlusions, stenoses, elongated cervix, cystic fibroid, and other tumors, abscesses, hæmatocele, etc., in tinkering to avoid an operation.

Of granulations in not curetting.

Of extra-uterine pregnancy in failing

to cause destruction by electricty and the use of ergot in the early stage, or to do laparotomy at the earliest discovery at any later stage.

Of suppressed menses, acquired consumption, hysteria, vertigo, melancholia, nervousness. Anæmia leucorrhœmia, headache of a character commonly described by patients as a "hot sensation on top of the head" or a "drawing pain in the back of the head," in treating the symptom without referring to the female organs as the seat of the disease.

Of menorrhœa and menorrhagia in doing without ergot in some form, and in hemorrhagics, without astringents locally,—tampons, cold applications, recumbent position and rest.

Of inverted uterus and pregnancy by mistaking them for tumors, hæmatocele, cystocele, etc., and treating or operating accordingly.

Of miscarriage, without removal of every portion of the fœtal tissues, membranes, etc.—in all cases where an abortion is inevitable, and without proper local after treatment.

Of malignant tumors, vicarious menstruation, retro-latero or ligamentous hæmatocele in neglecting palliative treatment or an operation for prolonging life, and giving a very unfavorable prognosis.

ERRORS THAT MAY ARISE IN MEASURING THE LENGTH OF THE LOWER LIMBS.*

J. S. WIGHT, M. D.†

So long as surgeons consider it important to overcome the shortening of the lower limb after fracture of the femur, it will also be important to remove the sources of error in the determination of the amount of this shortening.

What are the sources of error in measuring the length of the lower limb? A brief statement of these points is not out of place, since there is a difference of opinion in regard to them, and since there is thought by some surgeons to be important to make a lower limb as long as it was before its femur was broken. The facts relate to the comparative lengths of the lower limbs, as determined by measurement.

Now what are the requirements of a true and faithful measurement? It must be made by a reliable tape-line; one that will not stretch by pulling on it. It must be from symmetrical points of bone,—one on each side, corresponding to the one on the other side. It must be made with the lower limbs parallel and meeting the transverse axis of the pelvis at the same angle. It must be made with the lower limbs in the same degree of flexion. Finally, it must be made without prejudice, for the simple purpose of establishing the truth.

The usual point of measurement above is the superior anterior process of the ilium. I sometimes measure from the top of the trochanter major. The points below are the lower ends of the internal and the external malleoli. Other points may be used, but these will answer.

The following errors may arise from the attitude of the lower limb: Abduction of the lower limb shortens its measurement. Adduction of the lower limb lengthens its measurement. Hence, an error of measurement will arise, when one lower limb is adducted, and the other is abducted. Then let the lower limb whose femur is broken be adducted, and the other abducted, aud the real shortening will not be detected. In a case of this kind there would be a scientific error. Flexion of the lower limb shortens its measurement. Extension of the lower limb lengthens its measurement. Hence, let the lower limb in which the femur has been broken, be extended and let the other limb be flexed, and the actual shortening will not be detected. Now let one lower limb be abducted and flexed, and let the other be adducted and extended, and the error in the measurement will be greater still.

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* Read before the Brooklyn Surgical Society, September 21, 1893.

†Professor of Operative and Clinical Surgery at the Long Island College Hospital, Brooklyn, N. Y.

Tilting the pelvis, as any one may see, acts like adduction and abduction on the comparative measurements of the lower limbs. Tilt one side of the pelvis downward, and the lower limb on that side is relatively abducted, and the one on the other side is relatively adducted. Hence, tilting the pelvis may cause an error to arise in the comparative measurement and lengths of the lower limbs.

The normal a-symmetry of the lower limbs is another source of error in their measurement: If the longer limb has its femur broken, it may be easy enough to make it of the same length as the other limb; but if the shorter limb has its femur broken, it may be impossible to make the limb as long as the other.

There is still another source of error possible in measuring the length of the lower limbs. It arises in this way: A traction weight is applied to the lower part of the limb, in order to overcome the overlapping of the fragments; or the surgeon takes hold of the leg and foot and pulls downward for the same purpose. The measurement is made during the time of this traction, or at the time of this pull, and is perhaps put down as a clinical fact. The traction, or the pull, is applied until the injured limb becomes as long as the other.

In my clinical lectures, when at the bedside of the patient with a broken femur, I have often demonstrated how a limb could be elongated by traction in the manner mentioned. I had attributed the effects to the fact that the lower fragment had been brought downward into a better reduction. A record was made of the measurement at the time of the traction or the pull. Also, a measurement was made and recorded before any attempt had been instituted for the purpose of reduction of the fragments. After union of the fragments had taken place, and the patient had got up and gone about, another measurement was made and recorded. These measurements varied: The shortest measurement was the one made before the reduction of the fragments; the next measurement, the one depending on the traction or pull, was the longest; and the one made after the treatment was complete and the patient had been divested of apparatus, as we may well believe, was intermediate in length between the other two measurements.

In time the full significance of these facts came to my mind: that the lower limb can be elongated by means of traction or pull. In order to test this conclusion in a proper and trustworthy manner, I resorted to experiment. I obtained a dynamometer to measure the traction applied in pounds, and used it to pull upon the normal lower limb. The pull to be applied in each case was fixed at thirty pounds. The limb was measured both before and after the pull, and the length in inches was noted together with the age and occupation in each case.

THE MEASUREMENT OF TWENTY NORMAL LOWER LIMBS, BEFORE AND AFTER THE APPLICATION OF A TRACTION OF THIRTY POUNDS.

	Occupation	Age	Limb	Before pull	After-pull
1	Stable-boy	16	Left.	33.2-8 in.	33.6-8 in.
2	Stone-cutter	23	Left.	34.2-8 in.	34.6-8 in.
3	Laborer	35	Right.	33.6-8 in.	34.2-8 in.
4	Sailor	27	Right.	33.6-8 in.	34.1-8 in.
5	Hack-driver	50	Left.	29.3-8 in.	29.5-8 in.
6	Farmer	30	Right.	33.3-8 in.	33.5-8 in.
7	Laborer	52	Right.	33.2-8 in.	34 in.
8	Carpenter	35	Right.	31.4-8 in.	32 in.
9	Photog'pher	24	Left.	34.4-8 in.	35 in.
10	Laborer	39	Left.	35. in.	35.3-8 in.
11	Laborer	34	Right.	32.4-8 in.	32.6-8 in.
12	Sailor	40	Left.	34.6-8 in.	34.7-8 in.
13	Bartender	21	Right.	33.6-8 in.	34.3-8 in.
14	Seaman	30	Right.	34.4-8 in.	35 in.
15	Laborer	25	Right.	33.6-9 in.	34.1-8 in.
16	Laborer	19	Left.	31.4-8 in.	32 in.
17	Seaman	50	Left.	34 in.	34.3-8 in.
18	Seaman	44	Left.	34 in.	34.4-8 in.
19	Engineer	38	Right.	33.4-8 in.	33.6-8 in.
20	Seaman	20	Right.	35.2-8 in.	35.4-8 in.

The twenty cases above tabulated give the following conclusions: The greatest lengthening of the lower limb after a traction of thirty pounds was six-eighths of an inch; and the average lengthening was $\frac{33}{80}$ of an inch, or nearly one-half of an inch.

Other cases were measured, showing lengthening of the lower limb under traction, but the above twenty cases were all that I recorded. I am reasonably certain that a large number of cases will show a similar result. In fact, I have often verified this lengthening in cases of fracture of the femur. When the fragments have united, apply the tape-line, with the lower limb under traction, and then stop the traction, with the tape-line still applied, and it will be more or less slackened.

The traction was applied only during the time it took to make the second measurement; what effect it would have if it were kept up for three or four weeks I know not, but am convinced that it would be greater than has been noted above.

A traction of ten or fifteen pounds, kept on for four or five weeks, would doubtless have as great an effect as thirty pounds kept up for one minute. In fact, ten pounds can do more work in four weeks than thirty pounds can in one day: hence, we have not obtained the maximum effect in the lengthening of the lower limb by means of traction.

The general conclusion then would be that the traction-weight used in the treatment of a fracture of the femur will lengthen the lower limb, irrespective of the removal of the longitudinal displacement. If this is so, since bones cannot stretch, the change must take place in the joints: the ankle-joint must be excluded: the hip-joint may be effected to some extent; but the chief cause must be found in the knee-joint: that is, the ligaments of the knee-joint stretch under the traction we put upon the lower limb.

There is a modifying circumstance which accompanies the traction. Traction tilts the pelvis downward on the side where it is made, and that tends to shorten the measurement of the lower limb, as we have seen;—hence, the lengthening may be even greater than we have made it.

The opinion we are obliged to form on this subject is: That a measurement of the lower limb at the time of the action of the traction-weight is incorrect, incompetent, misleading and irrelevant, as a piece of surgical evidence. To make a measurement reliable and admissible, it must be made after the removal of the traction-weight. Hence, it must happen that all statistics that have been founded upon such measurements are without any practical value whatever. This must be so since the traction-weight vitiates the correctness of the measurements.

Here we may mention one other source of error in the measurement of the lower limb, under any circumstances: It is found in the personal equation. Does the surgeon desire the full expression of the facts in the case? Then let him see to it that he removes every source of admitting error in his professional work. Does the surgeon desire to make it appear that he can get better results than those which others can obtain? Then the best thing for him to do is to lay aside all ambition except that which leads him forward in the search for the truth.

STATISTICS CONCERNING EYE DISEASES IN THE ROCKY MOUNTAIN REGION.*

JOHN CHASE. M.D.,† DENVER, COLORADO.

I have often been asked by patients and physicians if I did not consider Colorado climate particularly trying to the eyes. The impression is prevalent that those forms of eye disease which are induced or aggravated by bright light, heat and dust, are more commonly met with here than in the Eastern States.

In conversation with physicians long resident in the Rocky Mountain Region, I have been struck with the almost universal prevalence of the opinion that conjunctivitis, trachoma and ulcerations of the cornea are marked peculiarities of this region. The traveling public are so thoroughly impressed with this idea that I have often met among eastern visitors the expressed fear of contracting eye disease during a short residence in our climate. The ubiquitous dark glasses are worn by hosts of these tourists as a defense against maladies which are supposed to lurk in our dust and sunshine. I have even heard it asserted that the bountiful supply of oculists in our Western country is an evidence of an effort of nature to supply an antidote for disease. If I am not mistaken the records of this Society show that the experience of oculists is in accord with the sentiments I have expressed.

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* Read before the Colorado State Medical Society, 1893.

†Professor of Ophthalmology and Otology, University of Colorado.

For several years I have been skeptical of the truth of this generally received belief, although during my first two or three years residence in Denver I accepted as a fact that which everyone seemed to believe. So far as I am aware, there have been no carefully compiled statistics to guide us in drawing scientific conclusions as to the relative frequency of various eye diseases, East and West. I am fully aware of the errors which may creep into comparisons such as I shall here make. I know that the number of cases on which I base estimates is small; I admit that methods of recording cases differ,—for example, one observer may report 1,000 cases from 300 or 400 patients, while another would allow but one record for each patient, still I believe that a comparison can fairly be made after eliminating, so far as possible, all causes of error and dissimilarity in records.

A comparison of diseases other than those I mention would be interesting, but the chief object of this paper is to discover if the Rocky Mountain climate predisposes to certain diseases of the eye. As an evidence of the youthfulness of our population I have also called attention to the number of cases of senile cataract East and West.

For the purpose of comparison I have placed in the table figures relating to conjunctivitis, acute and chronic, trachoma, lachrymal troubles, iritis, ulcers of the cornea, and senile cataract. From the various reports at hand, I have selected as fairly representative of different sections of the country, the following: Presbyterian Eye and Ear Hospital, Baltimore; Ophthalmic and Aural Institute, New York, for years 1887, '88 '89; St. Mary's Free Eye and Ear Infirmary, Detroit; Illinois Charitable Eye and Ear Infirmary, Chicago, 1890; Wills Eye Hospital, Philadelphia, 1890; Denver cases during the years 1892 and 1893.

If reports from further South had been used, elements such as race characteristics would have required attention.

I refer to three consecutive reports from New York Hospital to illustrate the fact that the ratio of diseases in any given institution is quite constant.

My own report is made from the record of private patients during 13 months ending June 1st, 1893, and comprises 984 cases.

The results would have been almost identical had I used clinical cases, but my private record was more reliable and therefore preferred.

	Acute Conjunctivitis	Chronic Conjunctivitis	Trachoma	Lachrymal	Iritis	Ulcer Cornea	Senile Cataract
Presb. E. & E. Inf. Balt...	20.8	20.8	.9	3.7	2.6	20.1	5.5
O. and A. Inst. N. Y. 1887.	6.1	13.2	4.2	2.3	1.4	3.1	3.5
" " " 1888.	9.2	13.2	3.9	2.4	1.5	2.9	2.3
" " " 1889.	4.7	16.1	5.4	2.3	1.3	2.9	1.5
St. Mary's Inf., Detroit...	5.9	2.7	5.6	2.3	2.3	2.4	1.2
Ill. Char. E. & E. hosp. '90.	5.8	5.4	5.9	2.1	3.2	4.2	2.7
Wills Eye Hosp. Phila. '90.	.9	6.	1.4	1.9	1.7	2.7	2.05
Denver, 1892 and 1893.....	5.8	2.5	2.9	3.6	3.9	3.1	1.1

From an examination of the table it will be seen that Colorado is peculiar fortunate in the matter of conjunctivitis, as only one report gives a lower record in the acute form and none in the chronic. In the reports from Baltimore and Philadelphia no division is made on the basis of acute and chronic, but the total of the two varieties exceeds that of Denver. I wish to call particular attention to the fact that we have this year in Colorado, suffered from an epidemic of acute conjunctivitis. More than four-fifths of the cases in my report were met with after June 1st, of the present year. The epidemic became so prevalent in the city schools that the authorities in one or two instances asked for an examination of the pupils and took measures to limit the spread of the disease. Notwithstanding the presence of this epidemic the ratio of conjunctivitis for Colorado is exceedingly low.

In trachoma, Colorado surpasses two of the reports and stands below the rest.

Inflammation of the lachrymal tract seems to be very prevalent in this locality, if the table is to be taken as a guide. I will add that the result conforms to my experience during seven years residence in Denver.

In diseases of the iris also, Colorado shows an unpleasant preeminence, but it will hardly be urged that this disease is much influenced by climate.

In ulceration of the cornea there seems to be a very constant ratio for all of the reports.

Senile cataract does not appear to be common here, and I believe for the same reason that we do not see many cases of glaucoma, namely, the youthfulness of the population. The Western population is notably young. The pioneer's of the early '60's are not yet old men, while the great mass of our citizens, who have come West during the last 15 years, have been under 35 years of age.

During the year I have seen but two cases of true snow blindness, and in common with other observers believe this disease to be rare.

It is difficult to explain these figures, but I believe that fuller notes and larger collections of cases will confirm the conclusions drawn from this small table. All know how irritating to the conjunctiva are our numerous sandstones, and all have experienced the unpleasant effect of riding over our plains or mountains in the glare of an unclouded sky. Personal experience would lead most people to think the common impression right and my tables wrong, but I believe that careful observation will confirm my conclusions.

I offer the following as a possible explanation. In this dry climate and at this altitude, the conjunctiva tends more rapidly to recovery than it does in the East where moist nasal catarrh is so common. I freely concede that the causes for conjunctivitis are more abundant here than in the East. It is possible that hyperæmia is more prevalent, although it would be difficult to establish that fact. What I do maintain is that of the cases of conjunctivitis and trachoma requiring treatment we do not see so large a ratio here as in the East; while in lachrymal troubles and ulcerations of the cornea we have to deal with only an average number of cases.

SOCIETY REPORTS.

AMERICAN MEDICAL ASSOCIATION, SECTION OF NEUROLOGY AND MEDICAL JURISPRUDENCE.

[ABSTRACT OF PAPERS.]

ADDRESS BY THE CHAIRMAN, Dr. C. K. Mills, of Philadelphia.

THE INFLUENCE OF SPECIAL SOCIETIES AND SECTION WORK ON THE DEVELOPMENT OF NEUROLOGY IN AMERICA.

The writer suggested the advisability of limiting the time for discussion to five minutes, except in the case of the reader of the paper who should close the discussion. He referred to the excellent work done by the Philadelphia Neurological Society, stating that more than one-half of the work done by that society would not have seen the light had not the society been in existence, giving this as an example of the advantage of such societies. The American Medical Society can best advance by allotting special work to sections. The appointment of commitees to do special work has been of great value. But too many isolated cases have been reported and papers have not always been well prepared in the work of these societies. A great advantage of small societies is that they secure definiteness of aim.

ON THE WEIGHT OF THE BRAIN,

by Dr. Henry H. Donaldson, Chicago, Ill.

It is important to determine how far we may draw inferences from the weight of the brain. In a large number of examinations it has been shown that the weight of the brain in the male is greater than in the female; that the weight of the brain in insanity is not unusual except in cases of wasting disease; that the brain wastes slightly in old age. These observations, however, are taken from the unfortunate classes. It is shown that the brain increases rapidly in size from birth up to seven or eight years and more slowly up to fifteen or twenty. Then for the next few years there usually occurs a slight falling off in weight, which gives place to an increase up to 35 or 40, the weight remaining constant for 10 or 15 years, then decreasing. It must be remembered, however, that these facts are gained from an examination of the dead and not the living subjects, therefore the curve which represents the course of brain growth cannot be taken as representing growth of the individual brain. If we could study the favored classes we might find different results. Brain growth is especially rapid during the first year. Cells and their prolongations are the structural elements of the nervous system. All nerve cells are formed before birth and the brain increases after birth by the enlargement of the elements already present, and not by the formation of new elements. In the human brain the white substance is but little less than the gray, but we do not know what the physiological interpretation of the medullary substance is. The granules in the cortex and other localities are undeveloped nerve cells which by growth are transformed into the characteristic ganglion cells. The conditions of growth must be delicate, so two individuals starting with nerve cells of the same weight at birth, arrive at maturity with very different brain weight. The size and number of the elements and relative abundance of the medullary substance must be the next step in the interpretation. Race, age, sex, stature, bodily weight, mental condition, individual development, cause of death, autopsy are all factors to be considered.

DYSPEPSIA AS A NERVOUS DISEASE, OR INDIGESTION IN ITS NERVOUS ASPECT AND RELATIONS,

by Dr. C. H. Hughes, of St. Louis.

The purpose of Dr. Hughes' is to place on record the fact which is now quite generally recognized, that dyspepsia, as we generally encounter it, is more frequently a secondary disease than a primary one, secondary as to degenerative or exhaustive changes in the central nervous system ; and the illustrations in the paper are drawn from the class of people who furnish us our patients as dyspeptics, and from some portions of the rest of the animal kingdom. It is a well-known fact that hogs never have dyspepsia; that when you come among trained animals, however, you first find the elements of dyspepsia, owing to the animals being subjected to a certain extent, to those habits of life and environment which bring about the neuratrophic condition from which dyspepsia arises as a secondary disease.

NOTES ON THE TREATMENT OF EXOPHTHALMIC GOITRE.

by Dr. J. Madison Taylor, of Philadelphia, Pa.

Dr. Taylor takes up the subject of exophthalmic goitre as understood at the present time, reviews its relationship to other vascular disturbances, associated with enlargement of the thyroid, as myxodema, cretinism and acromegalia. He does not see that at present the thyroid physiology warrants any large measure of hope that we shall treat this malady through thyroid juices, as in the case of the other disorders mentioned, and yet promises to explore this field later. He confines himself chiefly to the analysis of a number of cases long under his care, some of them for many years, and most of whom are well, summarizing the means through which these were improved. The treatment of maladies which demand but little constant supervision and yet require prolonged watchfulness, is more or less difficult and unsatisfactory because such cases wander away, will not persist in treatment, and from their nature of unhopefulness, have a tendency to fall into the hands of other medical men and have their treatment changed, etc., make it difficult to pursue any consistant plan, even with those inclined to be faithful. He takes the ground that this disorder is capable of much more hopeful treatment than is generally thought; that most cases are enormously improved, if rightly handled; that many may get well.

The question of treatment is chiefly considered from the standpoint of his own experience. This consists in:

1. Regulated rest, with carefully graduated activities as time and circumstances warrant, systematic measures directed to the upbuilding of the general health, careful attention to nutrition, recognizing the trophic elements in the disorder.

2. Careful attention to vascular conditions, which are most noticeably at fault and which demand the most constant treatment. This consists of varying measures, regulating vaso-motor activities, as well as loss of nervous force through the easily disturbed nervous balance. This is done through attention to the skin from the surface by means of certain remedies which seem to exert a control over the constant tendency to vaso-motor neuroses, both superficial and deep.

3. To search out constitutional defects and remedy these, eliminate accidental poisons, either diathetic or temporary, eliminate toxines, as of internal sewage

poisoning which has a very direct bearing.

4. The regulation of the nervous or emotional balance by careful attention to the habits and environment of the individual, carefully regulating, so far as possible, the habitual emotional strains and the possible ones, making much of moral teachings to those whose will power and mental equilibrium are gravely at fault constitutionally, and as inevitable entanglements due to months and years of suffering and susceptibilities.

5. A careful consideration of such measures as are regarded as specific, as electricity, of which much has been made by many writers, but whose value consists chiefly in the system and encouragement which is thereby exerted over the disordered emotional states.

Finally, a summary of the cases under observation when the original paper was written in 1888, and the report of a number of others seen since then, and a careful review of the symptomatology, and recent means of treatment.

SUGGESTIONS ON THE TREATMENT OF LOCOMOTOR ATAXIA,

by Dr. Daniel R. Brower, of Chicago.

Some cases may be cured and some may have the rate of progression considerably impeded. If the disease is recognized in the preataxic stage, rest for three months should be the foundation of the treatment. Iodide of potassium in large doses, fluid extract of ergot in full doses, and galvanism are of value. Hypodermic injections of morphia are most valuable to relieve paroxysms of pain. Carefully guard the digestive organs; alcoholic stimulants and sexual intercourse should be prohibited. When the second stage or the stage of incoördination has been reached, when the disease usually progresses rapidly, ergot will sometimes prevent the progression. Suspension is of service, continued as long as possible, five to fifteen minutes. In this stage the injection of chloride of gold and sodium is advisable, at the same time employing phosphite of zinc and arseniate of sodium, also galvanism; no benefit from internal administration of any preparation of silver. Cold bathing is of value; hot baths contra-indicated. The pains of the second stage are met by morphia ; sometimes phenacetine, antipyrine, etc., answer the purpose better. Patients can be taught to regain some degree of coördination by the practice of standing with feet close together, with eyes closed. If the patient stands in the bath tub and has cold water poured on his spine, he will more speedily regain this coördinating control. Bladder needs attention to avoid possible cystitis. Use hypodermic injections of morphia to stop gastric crises. In the third stage use tonics; galvanism to the spine and faradism to the surface; injections of cerebrine and other animal products have thus far in the writer's experience proved unfavorable, yet may admit further trial.

DISCUSSION.

Dr. T. D. Crothers recommended Turkish baths and said they sometimes effected an apparent cure.

Dr. C. H. Hughes, of St. Louis, suggested that the diagnosis was incorrect in cases of apparent recovery, and that the correct diagnosis in such cases should be multo-neuritis. He considered recumbent flexion superior to extension.

Dr. F. R. Fry, of St. Louis, stated that a great deal of trouble arose from the extravagant claims of quacks to cure this disorder. There is the greatest discrepancy in recommendations of practitioners. We have all of us seen cases of genuine tabes do well, but as there are many cases of apparent or temporary improvement under various methods of therapy, we should be careful about formulating conclusions as to the proper treatment.

Dr. Brower, concluding the discussion, said that he was satisfied that some cases of locomotor ataxia, if the treatment is commenced in the preataxic stage and is constant and proper, can be greatly improved, and perhaps some recoveries may take place.

HEMIPARAPLEGIA, REPORT OF A CASE COMPLETELY RECOVERED AFTER ONE YEAR'S DURATION.

by Dr. L. Harrison Mettler, of Chicago.

The writer concludes that the correct explanation of the case indicates that we may have hemiparaplegia from a lesion in the lower part of the cord in which the anæsthesia and paralysis appear upon the same side of the body, but that further investigations are needed on this point, though the writer feels sure that the text-books are somewhat too dogmatic in asserting that in all cases hemiparaplegia is a paralysis of one-half of the lower part of the body with anesthesia of the opposite half.

AURAL VERTIGO, MENIERE'S DISEASE,

by Dr. L. Harrison Mettler, of Chicago.

Medical literature abounds in cases wherein a sudden attack of vertigo associated with loss of hearing was diagnosed as hemorrhage into the labyrinth, without further investigation into the correctness of the inference, but vertigo as a mental phenomena seems to be of far too complicated a character to presuppose so simple an origin. If the views of Spitka and Starr are true in regard to the sensory paths in the medulla, they bear strongly in favor of this sensory motor theory of vertigo. Every indication points to the fact that we must look for the center of equilibration not in one particular part of the brain, but in the harmonious action of the various sensory and motor centers one upon the other. Meniére himself seems to have believed that only the semicircular canals are affected in true Meniére's disease. He, however, declared the canals to be the cause of cerebral symptoms on the strength of a single observation, and even that observation was not conclusive as to that particular case. Much confusion has arisen in regard to this affection, disease in any part of the internal ear and even of the middle ear, has been termed Meniére's disease, though Meniére himself restricts it to the semicircular canals. Gower strongly supports the labyrinthine origin of vertigo, but his proofs are very inadequate; though we admit the implication of the semicircular canal in aural vertigo, it still remains a difficult matter to explain the vertiginous symptoms and loss of hearing upon his hypothesis in all cases. The semicircular canals in the sharks have been removed without obtaining any disturbance of movement. There is no regular correspondence between the amount of deafness and the intensity of the vertigo with total loss of hearing in Meniére's disease. All known methods of diagnosis prove that the nerve itself and not merely the internal ear is affected. Physiological experiment shows that simple pressure does not cause total loss of hearing, when no injury is done to the cochlea, and no case has ever been reported in which the cochlea was primarily affected with consequent involvement of the canals and vertigo. Hence in Meniére's disease the writer concludes that the lesion must concern the whole labyrinth or lie entirely outside of it. There is little doubt about the central nature of the disease in many of its aspects. The sense of irritation may sometimes be in the semicircular canals just as sometimes it may be in the eye or in the stomach, but the immediate cause of the vertigo cannot be there, and in view of the few pathological data at hand, we are not justified in assigning all cases of vertigo to an unknown and undemonstrable lesion of the internal ear.

A METHOD OF LOCALIZING POINTS IN THE HEMISPHERICAL GANGLIA,

by Dr. William Fuller, of Grand Rapids, Michigan.

The writer stated that he had hardened a brain with great care, separated the lateral halves, and each half was carefully sliced by a gauge, so that the slices were three-sixteenths of an inch thick, perpendicular to a line in the long axis of the brain. By this means he had obtained photographs of 74 vertical transverse cuts of the brain. Dr. Palmer presented a model of the brain made in the manner indicated, to show the anatomy of the brain.

Dr. Palmer stated that in 1877 he made a craniectomy for the relief of idiocy, an account of which was published in the *Canadian Medical and Surgical Journal* of 1878; he stated that he was the first to perform that operation. The operation was ridiculed in both America and Europe at the time, but has since been claimed as originating with European surgeons.

A CASE OF SUBCORTICAL CYST OF THE LOWER PART OF THE ASCENDING PARIETAL CONVOLUTION; OPERATION; RECOVERY.

by Dr. Theodore Diller, of Pittsburg, Pa. and Dr. J. J. Buchannan.

A thorough history of the case is given by Dr. Diller. Nearly all the important symptoms of intracranial growth were present. Headache, vomiting, vertigo, convulsions and paresis. From the history of the case it was evident that a lesion was located in the left Rolandic region, involving principally the hand center. The absence of sensory symptoms seems to indicate that the lesion was situated anterior to the Rolandic fissure, and from the fact that paresis preceded convulsions, the lesion seemed probably a subcortical one. Thus the means were given for determining the proper position of the opening of the skull. Operation was done by Dr. Buchannan. The relative method of Thane was employed to locate the fissure. Dr. Buchannan employed a thin sheet of aluminum, cut in the form of a segment of a circle, having an angle of 67 degrees and a radius of three and three-eight inches and molded to fit the average skull, when its straight sides are applied respectively to the median line and to the part of the scalp corresponding to the fissure of Rolando. While the result of the operation fell considerably short of an entire cure and is in a measure disappointing, yet it was followed by distinct and unmistakable benefit to the patient. It is too early to tell what the ultimate result will be. The case offered strong evidence in support of the view that the ascending frontal convolution is exculsively related to motor function. The cortical representation of the forearm and hand are located in the ascending frontal convolution; the cortical subdivisions of the arm area are related to each other as follows in the ascending convolution, that for the shoulder highest, elbow, wrist, fingers below in the order named; center for the thumb is located in the ascending parietal convolution, closely adjacent to posterior bed, and a little below that for the fingers. The theory that a subcortical lesion is apt to produce paresis before convulsions finds confirmation in this case, and the general principles of localization as enunciated by Horsley, Seguin, Mills and others are well exemplified in this case.

SURGERY IN THE INSANE

by Dr. C. B. Burr, Pontiac, Michigan.

This paper contains a collection of cases illustrating phases of surgery which come under the eye of the hospital alienist, including the gynecological operations; also two cases of melancholia in each of which the operation of trephining had been done, showing the futility of trephining. A case is given indicating some of the great difficulties encountered in the care of old dements. Suicidal attempts are far from infrequent. Case illustrating the curative effect of operations *per se*, well known to alienists and which of late surgeons are beginning to recognize. Herniæ and perityphlitis are relatively frequent in the insane, but often pass unoticed.

In the discussion of this paper, Dr. H. N. Moyer held that the element of consent was extremely important, especially where surgery of a very radical character and which is not as yet well grounded—as for instance the removal of tubes and ovaries where there is no apparent local disease—for the benefit upon the general nervous system, is employed. He referred to the fact that shock is comparatively slight in operations upon insane persons notwithstanding their general low nutrition.

Dr. James G. Kiernan, of Chicago, held that the position of superintendent of an insane asylum was a quasi legal one and that he is the guardian of the patient, and under such circumstances has the right to give consent for the patient for an operation, and especially is that true in an emergency case; the removal of healthy tubes and ovaries is not likely to produce a permanent improvement. The counter irritation may produce a temporary improvement, but such operations are not justifiable. He referred to the improper operation of a so-called great apostle of the American operation or orificial surgery, and its frequent evil results.

Dr. G H. Rohe, of Catonsville, Md., held that a marked improvement did follow such operations and that in many cases they were justifiable. He believed the opinion given by a legal member of the Pennsylvania board of lunacy was not worth the paper upon which it was written, that is regarding the question of consent, which is the most important point touched upon in the discussion; in intervals of lucidity insane patients could properly give consent; but an insane person in the eyes of the law is not an individual and cannot give consent, but the speaker believed that a legal guardian appointed by the court is a guardian of the individual's person; he thought the liability of the operator to a suit for malpractice was sufficient protection.

Dr. Moyer thought that the question was whether this operation of removing the ovaries and tubes was justifiable at the present time in a given case, and what the general opinion of the profession was as to how many will be cured by this procedure.

THERAPEUTICAL USE OF STATIC ELECTRICITY.

by Dr. G. F. Lydston, of Chicago, Ill.

The writer held that the use of static electricity in medicine has been too closely restricted to the more advanced neurologists. He has found it a very reliable agent in his office practice and valuable especially in neurasthenia, particularly in the forms associated with brain fag and sexual hypochondriasis. The application of the static current to the spine has seemed to have a marked stimulating effect upon the genito-spinal centers. Some eleven years ago the writer suffered from profound neurasthenia which developed atrophic changes in the muscles of the hands. A cure was effected by static electricity. He has used the static current in a number of cases with a greater or less degree of success. In some instances it seemed to have no effect whatever. He has, however, seen no cases in which it seemed to be injurious, although his experience would lead him to believe that in some delicate and neurotic patients the agent should be used with a certain degree of circumspection.

Dr. L. C. Gray, of New York, said that too much had been expected from the use of static electricity at first, that it had proved disappointing, and there was a revulsion of feeling against it and it had been largely discontinued, but that very probably it was coming into use again. The improved machines of the present day are a great advantage; results have been surprising in certain cases; especially has it proven useful in cases of muscular atrophy.

Dr. Daniel R. Brower, of Chicago, called attention to the usefulness of this current in cases of chorea, and described his method of application, by placing the patient on an insulated stool and applying the current for from ten to fifteen minutes.

Dr. Lydston stated that the art did not seem to be exceedingly well defined at present; the question of the element of hypnotic suggestion should not be given too prominent a part; the effect of a current in chronic inflammatory troubles with the joints has been excellent; the current has been applied heretofore empirically, and there has been no great attempt made at the classification of the various indications; he does not know where to look himself for a clear presentation of the indications and methods of application of static electricity; with regard to his own case he was firmly convinced that he was cured through the medium of static electricity; he does not believe, however, that he had true progressive muscular atrophy.

SODIUM ARSENIATE IN THE NEUROSES,

by Dr. Harold M. Moyer, of Chicago.

Arsenic in nervous troubles ranks very high as a therapeutic agent. The objection to the use of Fowler's solution, that is the arsenite of potassium, hypodermically is that it is exceedingly irritating. Arsenic when exhibited beneath the skin has a far less toxic effect than when administered by the mouth. The fact of the arseniate of potassium giving rise to no local irritation allows the use of a much larger dose than of the arsenite. He has exhibited an arsenic equivalent in the arseniate of sodium,of 40 to 60 minims of Fowler's solution at a single dose, and it is a common practice to give an equivalent dose of 80 minims of Fowler's solution as the initial injection. It is necessary in order to prepare accurate solutions for hypodermatic use, to subject the salt to a temperature of about 300 degrees which drives off the water of crystallization. The method in short is worthy of more extended trial.

INSANITY AMONG CONVICTS

by Dr. M. V. Ball, of Philadelphia.

The paper presented illustrates some of the types of insanity found among persons convicted of crime. When we recognize that "every society deserves the criminals it has" we will endeavor to correct the evils that in a large part cause crime, and treat our malefactors not with a spirit of vengeance, not with a visitation of justice, not as sinners, but merely as obstructionists whom society must place under restraint or remove to a place where they can be of service instead of hindrance; then only will the penal question reach solution. Our present mode of justice is childish. What would be thought of the suggestion that a chronic maniac should be sent to an insane asylum for one year and then released unconditionally, and then after he had killed some one, again sentence him for a definite term of one or more years? The danger to society alone should be considered and the professional criminal placed in durance vile until cured, if that result is possible, or permanently if the danger to society is ineradicable, and wholly as a protection to society and irrespective of his sanity or insanity, his moral responsibility or irresponsibility.

WHAT SHOULD CONSTITUTE RESPONSIBILITY IN THE MEDICAL SENSE, IN INSANITY?

by Dr. Landon Carter Gray, of New York.

The object of the paper was to call the attention of the medical profession to the fact that great injustice is likely to be done to insane people by basing the view of their insanity upon the proposition that if a man is able to understand the nature, quality, and consequences of an act, he is legally responsible for such an act. The doctor most emphatically declared that the question of legal responsibility should be determined, not by laws, but by facts. Medical science demonstrates the fact that a diseased condition of the brain giving rise to mental aberration, permits of no half way ground in judging of sanity. Periods of remission cannot reasonably be called "lucid intervals," as is often done. After classifying the types of insanity which have been demarcated up to the present time as: the presence of hallucinations; the presence of delusions; the co-existence of organic disease of the brain; traumatic causation; causation from excessive use of narcotics; and the mental disturbances occurring from derangement of the organism induced by disease of non-nervous viscera, Dr. Gray called attention to the fact that in paranoia, mania and melancholia the reasoning powers and the memory are usually intact, yet the patient has undeniable hallucinations and delusions, and under the influence of those delusions and hallucinations commits acts for which he should not be held legally responsible. He cites the case of the paranoiac Dougherty, who imagined himself the beloved of Mary Anderson and that the world was conspiring to keep him from her and, in pursuance of this delusion, murdered Dr. Lloyd of the Flatbush Insane Asylum, and was planning to kill about a dozen public officers whom he believed to be in the conspiracy. Yet he declared himself sane and asserted that he knew the nature, quality, and consequence of his act. He was probably pronounced insane because his mania was so palpable, although some doubt prevailed in the public mind as to his insanity. The doctor concludes by saying that the only safe test of the legal and testamentary responsibility of a man lies in an answer to the simple question: Is he insane? If he is, he is not legally responsible, and this question can only be properly decided by competent physicians, not by fine spun theories of lawyers. Common sense must be applied to such cases rather than metaphysical definitions of mental aberration.

DOUBLE LESION OF THE BRAIN; CEREBRAL CYST AND CEREBELLAR TUMOR.

by Dr. Edward B. Angell, of Rochester, N. Y.

The object of the presentation of this case was to indicate that it undoubtedly showed an increase in development on the right side which had had to take upon itself the left brain function, and then in addition to that, not only were the centers corresponding to the speech center of the left side hypertrophied, but the surrounding cortical structure had been increased in area and character; and it is important to consider whether benefit cannot be derived by such indirect exercise.

Dr. James G. Kiernan, of Chicago, called attention to the case of the reeducation of the speech center in an adult, the recovery being complete, but a second attack produced aphasia. The autopsy showed that there was an old apoplexy destroying the left side, and the second attack destroyed the right. Dr. Kiernan doubted whether cases of epilepsy were curable.

RECENT DEVELOPMENTS IN GUNNERY OF INTEREST TO THE MEDICAL JURISTS.

by Dr. J. N. Hall, of Denver, Colorado.

He said that newly introduced explosives are rapidly replacing black powder; he described the two most commonly used of these products, the American wood powder and the Schultze powder; the staining from wood powder is much less distinct than from black, and the staining from the Schultze powder is less marked than even the wood powder described; neither of the two powders mentioned ignited cloth or blotting paper at so great a distance as did the black powder.

Dr. Harold N. Moyer, in discussing the paper, called attention to the fact that the length of the barrel of the weapon should always be a factor in making up tables, and stated that there was always leakage of gases in revolvers; another interesting point would be not only as to the kind of powder, but also as to the amount of fulminate in the fixed ammunition, and as to the manner in which it is put into the cartridge, whether fine grained or practically in a solid mass.

THE SECRETARY, called attention to the fact that in some instances, in the case, for instance, of a double barreled rifle, the barrels were not of the same size, and that might have a bearing in criminal matters.

SENSORY SYMPTOMS OF THREE SYPHILITIC CORD CASES,

by Dr. Frank R. Fry, of St. Louis, Mo.

The purpose of the minute account of these cases given was that the writer felt, in the light of Dr. Erb's recent investigations, we are warranted in making very careful clinical records of our syphilitic cord cases in order that we may formulate a symptomatology which will help to more readily differentiate these cases.

In discussing the paper, Dr. L. C. Gray, of New York, held that the views of Dr. Erb that there are always exaggerated reflexes, have not met with success, and are disproved by these very cases of Dr. Fry. The speaker held that it was better to admit that we have not as yet discovered any pathognomonic symptoms by which we can detect a disease, than to be deluded; but that there are symptoms in quite a number of intracranial cases which, if taken early, would make it possible to relieve the disease and prevent its progress; he also believed that some such symptoms can be discovered in regard to spinal syphilis, but that they have not as yet been found, and, therefore, these cases are very valuable as a disproof of some of the assertions of Dr. Erb.

Dr. Moyer called attention to the necessity of these minute investigations, that physicians have generally been too careless in making diagnoses and as too hastily classing a disease as tabes or paraplegia, etc.; he thought that the grouping of fifty or one hundred cases such as Dr. Fry has described, would do more to elucidate the matter than anything else.

LESION OF THE RIGHT TEMPORO-SPHENOIDAL LOBE,

by Dr. W. J. Herdman, of Ann Arbor, Mich.

The writer stated that this lobe of the brain has been spoken of as being a latent region, destruction and irritation of which produced no special and distinctive phenomena. This region of the human brain is surrounded with darkness. The paper gives a very minute history of a case, which the writer at first diagnosed as one of arterial embolus obstructing the left anterior cerebral artery. The autopsy revealed that the regional attack had been due to a hemorrhage very extensive anterior to, and at the lower extremity of the right lateral cornu. Softening followed involving the hippocampus major at its lower extremity and the anterior extremities of the superior, middle and inferior temporal convolutions. The writer believes we are justified in the asumption that as far as any symptoms observed in this case can be justly referred to the lesion in the right temporal lobe, they tend to show that its function is of the same nature for the left side of the body that Ferrier has found the left temporal lobe to be for the right, a cortex center for hearing and taste. There is necessity for a systematic and thorough examination in detail of all the sensory motor tracts in every case of central lesion, after a definite plan which should, wherever circumstances permit, be rigidly carried out.

In the discussion of this paper, Dr. Charles K. Mills referred to several similar cases which appeared to demonstrate that the left upper temporal region is most particularly developed for word sound, and the right has a minor degree of development of the same function and takes on the function of the left in part but not entirely, in case of the destruction of the former.

HEMIANOPOSIA AND CERTAIN SYMPTOM GROUPS IN SUB-CORTICAL LESION,

by Drs. Charles K. Mills and G. E. de Schweinitz, of Philadelphia, Pa.

This paper deals chiefly with reference to the diagnosis of the locality of the lesion. The observations of the paper were confined strictly to cerebral cases. Seguin's three cases were summarized, which he regarded as due to lesion of the outer edge of the thalamus and of the internal capsule in its caudle parts. The first case of the paper showed right lateral hemianopsia, absence of Wernicke's symptom, dyslexia, temporary right hemiparesis, and Jacksonian epilepsy. Case two: right lateral hemianopsia, absence of Wernicke's symptom, dyslexia, right hemiparesis, partial right hemianæsthesia, partial word deafness and word blindness. Case three: right lateral hemianopsia, absence of Wernicke's symptom, temporary aphasia, dyslexia, right hemiparesis of spastic type, probable word blindness. Case four: left lateral hemianopsia, left hemiparaplegia and hemianæsthesia partial, aphasia temporary. Epilepsy, Wernicke's symptom. Case five: right lateral hemianopsia, absence of Wernicke's symptom, temporary right hemiplegia, persistent hemianæsthesia. Case six: left lateral hemianopsia, left hemiplegia. Case seven: right hemianopsia, right hemianæsthesia. Case eight: right lateral hemianopsia, absence of Wernicke's symptom, doubtful; slight right hemiparesis. Case nine: left lateral hemianopsia, absence of Wernicke's symptom at first, paresis of both legs, later right spastic crural monoparesis. Two cases were given which were probably cortical, one having a typical left lateral hemianopsia and the second right hemianopsia with absence of Wernicke's symptom.

Another case was given of right lateral hemianopsia followed a year later by left lateral hemianopsia, absence of Wernicke's symptom, macular vision retained, changes in color since, loss of sense of location.

Case also reported which would seem to teach that we may have either functional or organic disturbance of the word symbol center of the same character as that which produces hemianopsia when the half center for general vision is destroyed on one side of the brain.

AMERICAN INEBRIATE ASYLUMS

by Dr. Thomas D. Crothers, Hartford, Conn..

The essayist gave a history of the Binghamton establishment; managers of asylums who teach dogmatically the nature of inebriety and its only true remedies are not very far along in their scientific work, and asylums which claim large percentages of cures from certain means and remedies are not worthy of confidence. Inebriety is the most complex neurosis of modern research. The gold cure specifics so-called, are followed by an increased number of insane among those who have used the treatment, which is something to be expected as the more powerful the narcotic used to stop the drink symptom the more certainly insanity and profound degenerations of the brain centers will follow. The asylum care and treatment of inebriates began first in this century and has grown and extended to all civilized nations of the earth. American asylums have developed the disease theory and the practical character of physical treatment in institutions, beyond that of any others in this field. Asylums in this country represent nearly all stages of development and early growth, from infancy and childhood with its feeble conceptions and infantile efforts, to the boastful assumption and over confidence of youth, on to the dawning truth of early manhood when reason and judgment begin to reign. A few of these asylums discern similar great truths, which may be stated with confidence as ideals toward which there is a rapid movement. Inebriate asylums must take the place of jails and station houses. Inebriate asylums should receive the incurable inebriates and make them self-supporting and build them up physically and mentally. Inebriate hospitals should receive the recent cases and place them in the highest conditions of enforced health and vigor, and thus return a large number to health and sobriety again. Inebriate hospitals should be self-supporting when once established. They should be managed on scientific business principles like military training schools. Inebriate hospitals should be built from money raised by taxes on the sale of spirits, on the principle that every business should be obliged to provide for the accidents which grow out of it. These are realities which every inebriate hospital is approaching and which all experience point out as practical in the near future. The inebriate hospitals of to-day are only in the infancy of their work, contending with great opposition and prejudice, misunderstood, condemned and working against innumerable obstacles. There is an intense personality in inebriate hospitals. Inebriate hospitals and their work are the great new lands which only a few settlers have reached. They are calling to us to come and occupy, and thus help the race on in the great march from the lower to the higher.

LAWYER'S CRITICISMS OF EXPERT TESTIMONY,

by Dr. Clark Gapen, of Omaha, Neb.

The expert is an important factor in the various litigations that arise. As at present conducted, the trial of a case involving a medico-legal question is a mere farce as compared with the trial of a cause involving a pure question of law. Lawyers sometimes like to pose as learned in medicine. The expert should be selected by the court as advising it, and wholly with reference to his special knowledge of the question involved. We should teach medical jurisprudence in colleges properly. The so-called chair of medical jurisprudence usually teaches nothing but the mummery of some text book of ancient times. But the proper way is to give a forecast of what the student will encounter in the future. He should be taught to be frank, truthful, direct, plain and non-technical. Students go forth unequipped in this regard. Another cause of the disrespect of medical expert evidence is the common custom of participating both as counsel and witness in the trial. The court might properly take testimony as to the qualifications of the expert. A good way would be to have lists handed in by each side and let the court choose from the lists. The expert should avoid invading the province of the jury and giving an opinion on the case. The proper course is to put a hypothetical question for the expert to answer.

The following papers were also read:

1. Insanity in the Aged, by Dr. Frank T. Norbury, of Jacksonville, Ill.
2. Acute Mental Symptoms in Children, by Dr. Harriet C. B. Alexander, of Chicago, Ill.

A MODEL FOR CUPID.—"Well," said the artist, sharply, to the tramp who had entered, "what do you want here? Hurry with what you have to say."

"Sir," replied the tramp, with inborn dignity, "I did not come here to be insulted. I merely thought to step in and inquire if you had any model for your valentine Cupid. If not I desire to apply for the position."—*Lippincotts.*

A HARD SUBJECT.—The constitutional inability of some people to grow fat under the most favorable circumstances found an excellent example in the person of Mr. Ezra Sprawley, of Alderville. His wife's comical distress over the fact at last found vent in a remark which has passed into a by-word in that New England town.

"I used t' think," said the good, energetic woman and admirable housekeeper in a pensive mood one day, "I *used* to think that food, cooked proper an' dealt out liberal, couldn't help puttin' some flesh on folks's bones.

"An I c'nsidered, previous to weddin' with Ezra, that 'twas owin' to the fact that his sister Jane was a scant pervider that he looked so terrible peaked; but I misjedged her—an' him, that's the truth.

"Why, jest look at him now," said Mrs. Sprawley, dolefully, directing her visitor's gaze to the figure of her gaunt spouse as he stood in the barn door-way; "just look at him, thin as a match. Why, my land!"—here she passed to the portion of her remark which became historical:

"I've fed three hearty meals a day, reg'lar, to that man, for up'ards of fifteen years, an' he aint ever give the *fust evidence* of 'em."—*Youth's Companion.*

"A WRITER, who shall be nameless," says *Figaro*, "sent a story to a magazine. It was returned in an incredibly short space of time, with the remark that it 'lacked movement.'

"After some calculation, which disclosed the fact that the manuscript must have reached New York by one mail and left it again by the very next out-going train, the writer sent the manuscript back to the same magazine, with the remark that, considering the time it had made, he didn't see how they could expect a story to have a much swifter movement than that."—*Lippincotts.*

ENGLISH AS SHE IS WROTE.—"In the week immediately preceding her death, Elizabeth Fuidge, while suffering under the illness of which she died and *in the immediate expectation of death who was then staying at Weston-super-Mare for her health*, told Mary Fisher to take the keys of the dressing case and box and to keep the same."

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SATURDAY, OCTOBER 7, 1893.

EDITORIAL.

ECHOES FROM THE PAN-AMERICAN CONGRESS.

Among the subjects considered by the section of hygiene, quarantine, etc., none was more important than that involved in the following resolution emanating from and ably supported by Dr. Shakespeare of Philadelphia, Dr. Cyrus Edson of the New York Board of Health, and others:

Resolved: "That it is the sense of this section that in view of the prevalence of Asiatic cholera in Europe at the present time, and the constantly increasing number of foci of infection, immigration from European countries in which cholera exists should be temporarily suspended, as this action affords, in our opinion, the only certain means of averting a threatened invasion by the disease of countries of the American Continent."

Notwithstanding the importance of this resolution and the fact that it would have exercised a potent influence with our national health authorities in encouraging effective measures to bar out all visitation of an epidemic that has made fearful ravages in many sections of Europe during the past two summers—our exemption from which is the reward of the efforts and precautions of zealous and intelligent health authorities—this resolution failed of favorable consideration by the International Executive Committee to which it was referred. The reasons for this failure are not plain. Few Americans doubt the wisdom of the policy it suggests. Had it been submitted to a vote of the Congress there is no doubt it would have had a large majority in its support.

The chief opponent of the resolution was from over the seas, whence, for a long time we have been getting a great number of people we do not want, and who have not contributed to our moral, social, political or physical well doing.

Just the extent of the influence of Mr. Ernest Hart, the able editor of the *British Medical Journal*, in defeating the resolution we will leave for those to determine who were personally present. We fail to appreciate Mr. Hart's logic.

Our National Congress in framing our quarantine law, incorporated a provision giving to the President the discretionary power "to prohibit in whole or in part the introduction of persons and property from such countries or places as he shall designate, and for such period of time as he may deem necessary whenever, by reason of existence of cholera or other infective or contagious disease" in a foreign country, there is serious danger of the introduction of the same into the United States, despite the quarantine defenses. The resolution in question was in support of this provision of our quarantine law. It was intended as a second to this provision by an able body óf representative American physicians voicing the sentiment of the profession and of our people.

The Pan-American Congress was made up of representatives of the Americas, and should have been permitted to speak for America uninfluenced by English opinion. Cholera is indiginous to India, and all England has done or is doing for India is to garrison it. Let her put a military cordon about the birthplace of cholera and keep it within its native territory.

With our quarantine authority centralized we know where to look for its execution and whom to hold responsible for failures. Such resolutions, coming from the leaders of medical opinion, strengthen the hands and direct the conduct of those in authority. That we have not had a serious visitation of cholera has been largely due to our quarantine authorities under the zealous and intelligent direction of Surgeon General Wyman.

The politico-economic phases involved in the prohibition of immigration we do not attempt to discuss. Their consideration belongs more properly to those holding down chairs in our halls of legislation. There are facts, however, which cannot fail to press themselves home upon the American citizen and his law-makers (the few who are Americans). They cannot escape giving thoughtful consideration to the facts that we have more than 2,000,000 idle men in the United States; that this idle class is being added to monthly by immigration; that in the one month of July last it received an addition of 47,000 immigrants exclusive of those coming in through Canada and Mexico. As the cholera scare increases in Europe, immigration will increase unless American governments as a matter of self-protection impose restrictions. The true way to keep cholera from gaining a foot-hold in the United States is to prevent it being brought here by immigrant or merchant ships.

While cholera has not gained a foothold in London, it has extended its ravages over many sections of Europe and England. London's comparative exemption is due to the vigilance of her health authorities and to improved sanitary regulations. Where it has once gained a hold the stamping out process has not been a success.

We will let our English brother speak in his own emphatic way. "My thesis is that cholera death is a violent death, an unnatural death, a preventable death; that the very existance of epidemic cholera, not to say endemic cholera, is a reproach to the nation and to the community in which it exists. Being a violent death its prevalence is due to ignorance or apathy, which, from the dimensions of a blunder, easily develops into the proportions of a gigantic crime. Cholera death can be prevented and ought to be prevented."

All this is what the intelligent of the medical profession and the people of our country claim—that it can be prevented and that this is the more effectually done by preventing the landing on our shores of immigrants from infected countries. To fail in such precaution would be a "gigantic crime."

Yet another resolution urging measures of sanitary precaution failed of adoption, though urged with earnestness and a strong array of arguments by the most eminent of American authorities upon the subject of the epidemics by which we are threatened and from which we have the most to fear. In this instance it is surprising that an educated profession should be behind the people—far less zealous in their care for the public health. The resolution in itself is easy reading, and will impress the reader of average intelligence with its value as a sanitary measure—it urged the thorough disinfection of every piece of baggage or article belonging to an immigrant or to any member of the crew of immigrant ships. Against this could be interposed only the influence of steamship companies. When once the steamship companies are made to understand the certainty and thoroughness of the inspection to which they will be subjected, as a matter of self-protection they will be more rigid in their own sanitary precautions. If this work is a burden it is certainly one more easily borne by rich steamship companies than is a typhus fever or a cholera epidemic by dense communities.

The lesson should be impressed that there is an element of murder by willfully and knowingly carrying of disease among people free from it, and that it is equally criminal to permit such carrying where prevention is possible. The extent of our coast, the number of ports of entry, the wealth and activity of our commerce, only render the more urgent and important rigid measures. It is preventive measures we should adopt and press to successful execution, and not wait until an epidemic gets its grip upon our people. Our immunity thus far should not be permitted to lull our people and health authorities into that sense of security which will leave open the avenues of ingress. Important as is our commerce, it can be brought under such regulations as will not impose useless burdens or be productive of special embarrassment. All the commerce of the world brought into our ports will serve us little purpose if there is to come with it disease and death.

Among our own people regulations are imposed to prevent the transmission of epidemic or contagious diseases from one neighborhood or community to another, or along the lines of our inter-State commerce. These regulations are submitted to by our own people uncomplainingly, though they impose great hardship upon families and entire communities. It is recognized that the greater hardship would be to permit the disease to extend the territory of its ravages.

How She Kept her Word.—"Do you remember that rich and romantic Miss Rocques, who used to say she would never allow a man's poverty to prevent her from marrying him?"

"Yes, indeed, but I never thought she meant it."

"She did, though. She's going to marry a man who doesn't own a dollar in the world, and is deeply in debt."

"Is it possible? Who is he?"

"I don't remember his name,—some sort of a broken-down earl her mother picked up in London."—*Detroit Tribune.*

Old Subscriber (to editor).—Can you lend me five dollars?"

Editor.—"We cannot."

Old Subscriber.—"Paper not doin' much, eh?"

Editor.—"Well, we're holdin' our own."—*Lippincotts.*

How a Cold Affected Him.—A little boy caught a very severe cold while his mamma was out of the city, and on her return rushed up to her, and throwing his arms around her, cried, "Oh, mamma, both of my eyes is rainin' and one of my noses won't go."—*Lippincotts.*

A Pennsylvania testator recently provided that an interest in land devised to his daughter should, in case of her death without issue, be "reversible to my right consanguinary heirs.' —*General Digest.*

TRANSLATIONS.

ONE HUNDRED RADICAL OPERATIONS FOR INGUINAL HERNIA PERFORMED AFTER THE METHOD OF BASSINI.

Previous to 1891, the author, C. Nicoladoni, had performed the radical operation for hernia, only in cases where the ring was much enlarged, or where adhesions had taken place, making it impossible to wear a truss.

After the above mentioned year, and since he had seen the brilliant results following the method of Bassini, he has operated on one hundred cases, the results of which he now places before the medical profession.

He calls attention to two principal steps in the operation which produce such satisfactory results: First, the application of the ligature high up on the peritaneal covering of the sac. Second, the reconstruction of the posterior and anterior wall of the inguinal canal, by uniting the abdominal muscles with Poupart's ligament, and the accurate closure of the external oblique muscle.

Of the 100 radical operations there was one death after 16 days, due to pyæmia, the result of two septic ligatures; 5 healed secondarily, and in 94 union took place by first intention. The youngest patient was 2 years, the eldest 65. The patients were not instructed to wear any trusses after the operation.—(*Wiener Med. Presse. 1893.*)

TREATMENT OF TUBERCULAR DISEASE OF THE HIP JOINT.

Dr. Zitzke (Inaugural dissertation), has made a study of 51 operated cases, occuring in the practice of H. Schmid in Stettin during the years 1887 to 1891, and concludes that resection of the hip joint affords best results in tubercular coxitis.

The result of these cases is as follows: The operation was performed in 47 cases, of which 11 died, making a mortality of 21.5 per cent.—4 directly referable to the operation; 31 were entirely cured, equalling 61 per cent.; 4 improved and 5 unimproved. Seventeen of the 31 cures had good use of the operated limb, 11 moderately good, and 3 not so good. In a later investigation of the 40 cases discharged, the author found 22 entirely cured, 4 having a small superficial fistula; of these 26, 3 had excellent use of the limb, 11 good use, 6 moderately good and in 6 there seemed some difficulty in deciding. Seven had died; 1 from a local return, 5 from general tuberculosis, 1 from diphtheria and 7 were lost sight of.

The author comparing these statistics with those of other methods of treatment, particularly of iodoform injections, concludes that resection, if not exactly an ideal treatment, is, however. the most rational for this disease. He considers the operation indicated as soon as the disease has become fully established, particularly if crepitation can be demonstrated under narcosis. He places stress upon the removal of all tubercular matter when the resection is done, using the same care as he would in removing carcinomatous disease.

The after treatment is worthy of some mention. Extension is rarely resorted to; the limb is abducted, placed in a splint and bandaged. As a rule the patient is allowed to sit up on the third day and to get up on the fourteenth day, and is then encouraged to bathe and exercise.

As soon as possible the cane should be laid aside and walking encouraged by using the entire foot. A high shoe is never resorted to, the object being that the pelvis, on the operated side should incline downward. In order to avoid any flexion of the limb, the pelvis is raised during the night; lastly, exercises are systematically carried ont, such as mounting steps, kneeling, sitting, etc.—*Centralbatt für Chirurg,* 1893.

ABSTRACTS.

IMMUNITY AGAINST "CHOLERA."

In a recent paper, Dr. Klein, has opened up a new question with regard to bacterial poisons, a question which before him was partially already touched upon by R. Pfeiffer. Klein showed that when emulsions of various cultures grown on agar agar, prepared in the same manner as that employed by Haffkine in his "anticholeraic vaccinations," are injected into the peritoneal cavity of guinea-pigs, the result is the same as that following on a similar injection of an emulsion of an agar agar culture of cholera-bacilli. Klein used cultures of cholera bacilli, of the vibrio of Finkler, the bacillus coli, proteus vulgaris, the bacillus prodigiosus, and the bacillus of typhoid fever. By means of intraperitoneal injections of non-fatal doses, he rendered the animals refractory against further intraperitoneal injections of fatal doses, and he found that "the refractory condition produced by intraperitoneal injections of a non-fatal dose of one of the above six species holds good against all the other five." He argues from his experiments that while employing agar agar culture in this manner, the bacilli are used without their specific poisons, and that the pathological changes produced in the animals under such conditions are due to the "protoplasmic" or "intracellular" poison of the micro-organisms; and that probably the "intracellular" poison of these different species of bacteria is identical, since they mutually protect the animals. He further contends that a notable difference exists between the "intracellular" poison and the toxins elaborated by the bacilli in the culture medium, and concludes that though protected against such "intracellular" poison by such methods of vaccination as practised by Haffkine, the animals are not necessarily protected against the toxins elaborated in the culture medium (for example, gelatine) by the bacilli. In proof of this, he mentions that guinea-pigs which have survived the intraperitoneal injection of fatal doses of Haffkine's *virus fort,* when subsequently inoculated intraperitoneally with old liquified gelatine cultures of cholera bacilli promptly succumb.

Hitherto it was generally believed that an immunity artificially produced against the bacillus itself was sufficient to protect the animal against the specific infection produced by such bacillus, and so far as immunity is concerned, no distinction was drawn between the "intracellular" and the "metabolic" poisons. Klein's researches suggested so many new questions of vital importance, that it seemed inviting to examine this matter more fully, and to investigate whether an immunity acquired against the "intracellular" poison will also be efficacious against a true specific infection with the same bacillus.

A priori it would seem sufficient to protect the animal in such a manner as to enable the organism to destroy the bacillus itself, thus giving the latter no time or possibility to elaborate its toxins, and no doubt for all practical purposes where preventive inoculation is likely to come into play, this would be all that is required. It is well known that in some cases it is difficult, in others even impossible, to immunise an animal against the specific toxin, administered in lethal doses, although small doses of such toxin introduced by subcutaneous or intraperitoneal injections will readily render the animal refractory against the microbe manufacturing the toxin. This is so well known that a few examples only need be mentioned here. Gamaleïa has observed that guinea-pigs immunised against the vibrio Metschnikovi remain as sensitive to the toxin of this vibrio as non-immunised animals. Charrin and Gamaleïa further have shown that this is true also for the bacillus pyocyaneus and its toxin, and Selander and Metschnikoff have confirmed the same for the microbe of hog cholera and its toxin. Issaeff, lastly, has demonstrated that rabbits immunised against infection with the diploccus pneumonia are, nevertheless, extremely sensitive against the toxin of this microbe.

It is thus evident that the acquired immunity against certain bacteria is not necessarily accompained or followed by a resistance against the specific poisons of such bacteria, although these poisons were employed to establish the immunity. These facts may explain Klein's remarkable result, that animals resistant against large doses of highly virulent comma bacilli succumbed to large doses of old liquefied gelatine cultures, since it is quite possible that the gelatine cultures used by him contained lethal doses of the specific poision in addition to the bacilli present.

We have repeated some of Klein's experiments, and extended them in various directions, and have obtained results which may throw some fresh light on the important question of the relation of immunity to the "intracellular" specific poisons. As might have been expected, we have been able to confirm most of Klein's results.

I. In our own experiments we have employed the bacillus prodigiosus, bacillus pyocyaneus, and the vibrio of cholera. Agar emulsions of any one of them injected into the peritoneal cavity of guinea-pigs proved fatal, the appearances being identical with those described by Klein. Whatever microbe was used for intraperitoneal injection, it was found that in all the fatal cases the bacilli had multiplied enormously in the peritoneal cavity, were almost invariably present in the heart's blood, and, when looked for, also found in the pleural cavity. This shows that death in all cases was due to a true infection and not an intoxication, as Pfeiffer assumed. The multiplication of the proliferation are a *sine gua non*, and are especially striking when small doses of agar emulsions are used. In regard to cholera infections. Gruber and Wiener have already pointed this out. A similar proliferation also invariably followed on fatal intramuscular or subcutaneous inoculations of the agar emulsions. On the strength of these facts it seems at least doubtful that the fatal lesions should be the result of poisoning by "bacterial proteins." It is more reasonable to assume that we are dealing here with a true infection.

(2) According to Klein, sterilised agar emulsions intraperitoneally injected produce the same result as the agar emulsion, namely, peritonitis and death. As far as cholera is concerned, R. Pfeiffer agrees with him. Gruber and Wiener, on the other hand, disagree, and come to the conclusion that the "protoplasmic" poison of the vibrio has nothing to do with the typical infection. Our own experiments in this direction were limited, but we have failed to produce fatal results with sterilised emulsions prepared from half an agar culture of bacillus pyocyaneus and vibrio of cholera, although one-fifth of living agar emulsions sufficed to kill a guinea-pig. We have not followed up this matter, as it lay somewhat outside the purpose of this research, and we are thus unable to reconcile the contradictory statements of Klein and Pfeiffer on the one hand and of Gruber and Weiner on the other.

(3) As might have been expected from Klein's results, we found that the intraperitoneal injections of an emulsion of an agar-agar culture of the bacillus prodigiosus prepared in the same manner as that employed by Haffkine in his inoculations will immunise rabbits and guinea-pigs without fail against similar inoculations with agar cultures of the bacillus pyocyaneus. It is immaterial whether the immunising emulsion is given intraperitoneally or subcutaneously, or whether it is living or sterilised; the result is the same, and the animal will resist a subsequent peritoneal inoculation of a scraped agar culture of the bacillus pyocyaneus.

(4) *A fortiori* a subcutaneous or intraperitoneal injection of an emulsion of an agar culture of the bacillus pyocyaneus, sterilised or living, will immunise a guinea-pig or rabbit against a subsequent similar intraperitoneal injection of an agar culture of the bacillus pyocyaneus.

(5) This, then, is in full accordance with Klein's experiences, and requires no further comment. Now, if it be a question merely of one "intracellular" poison against another "intracellular" poison, a guinea-pig or rabbit immunised by the above methods might be expected to succumb to an inoculation with old but living bouillon cultures. It was found, however, that such animals resisted large doses of such cultures, which killed control animals in eighteen hours.

(6) Rats are insusceptible to anthrax, but extremely susceptible to an infection with the bacillus pyocyaneus. It was found that our white rats would resist enormous doses of anthrax cultures (eighteen hours old) scraped off agar agar,

and made into an emulsion, while they would die after even small doses of similar emulsions prepared with bacillus pyocyaneus, whether they had previously been treated with intraperitoneal injections of anthrax emulsions or not. From these results we must conclude that anthrax grown on agar agar contains no "intracellular" poison, or that if it does its "intracellular" poison does not immunise against that of the bacillus pyocyaneus. It should be mentioned, however, that though the anthrax cultures used were only eighteen hours old, there were already spores in many of the bacilli, although most of the bacilli were quite free from spores.

There seems to be some special relation between the so-called "intracellular" poison and the pathogenic property of a bacillus, or, differently expressed, if a bacillus is pathogenic to a certain species of animals, then its "intracellular" poison is also pathogenic. Again, if the "intracellular" poison be the same for various species of bacilli, then the lethal doses should be identical for the various bacterial species. Now, it is well known that rabbits are comparatively resistant against cholera infection, and we found that, in spite of injecting large doses of Haffkine's *virus fort* (a whole tube) intraperitoneally into even young animals, they were none the worse after it although one-twelfth of a culture of cholera bacilli would kill a guinea-pig. On the other hand, one-fifth of a culture of bacillus pyocyaneus intraperitoneally injected was invariably fatal to rabbits. Again, it required much larger doses of "prodigiosus emulsion" than of "pyocyaneus emulsion" to kill rabbits; the agar cultures least. And also in the case of guinea-pigs "pyocyaneus emulsion" was found to be more virulent than "prodigiosus emulsion." It appears, therefore, that there is something besides the "intracellular" poison which decides the fatal issue. In fact it seems that it is the active metabolism of the bacillus by which the specific toxic substances are produced in the body of the animal. Why is it that the one bacillus should protect an animal against another or several others, we do not attempt to explain. It may be a purely local immunity. How important the local predisposition and resistance are we know from various experiments, amongst which we may refer to those of Blagovestchensky and Roger.

(7) While testing this question still further, we immunised guinea-pigs by Haffkine's method, and found that subsequently they resisted intraperitoneal injections of large doses of bouillon and even liquefied gelatine cultures of comma bacilli. So far as gelatine cultures are concerned, our results are in direct contradiction to Klein's. Our gelatine cultures were two month's old, and it is possible that they did not contain so much toxin as Klein's. Large doses were used, however, half a culture for each inoculation, which killed the controls in less than twelve hours. If we are justified in assuming that bouillon and liquefied cultures contain the specific cholera toxin, from our experiments it would seem that previous inoculations of non-lethal doses of agar culture emulsions immunise also against the comma bacillus *plus* its metabolic products. Moreover, we found that the converse holds good, namely, that,

(8) By means of subcutaneous injections of small doses of virulent bouillon cultures of comma bacilli, guinea-pigs are immunised against intraperitoneal injections of large doses of Haffkine's *virus fort.* We must conclude, therefore, that, after a typical infection short of death, the animal will easily resist the "intracellular" poison.

(9) The result was in no way modified when, instead of living bouillon cultures, cultures heated up to 70° C. for ten to thirty minutes were used for subcutaneous vaccination. Animals vaccinated in this manner comfortably resisted large doses of the *virus fort.* In most cases the cultures were not filtered; the issue, however, was the same when cultures were employed for protective vaccination which had been deprived of their bacilli by means of filtration through a Hankin's porcelain filter. Guinea-pigs treated with such filtered cultures proved resistant against Haffkine's *virus fort.* It is, of course, doubtful whether our filtered or heated cultures contained the true cholera toxin. Large doses of such sterilized cultures, which had been grown under ordinary aerobic conditions, failed to produce death. Others (van Emergen, Cantani, Nicati and Rietsch, etc.) have succeeded, by means of filtration through Chamberlain's filters, in obtaining more active

toxic bodies. Hueppe and School again claim to have separated from cultures in eggs and choleraic dejecta extremely toxic substances. Gruber and Wiener have thrown considerable doubt on Scholl's results, at least so far as the toxin extracted from eggs inoculated with coma bacilli is concerned, and Huppe's method of extraction of toxins from choleraic dejecta is naturally open to criticism. The whole toxicology of cholera is at present in a chaotic condition, and as yet we know but little of the nature of cholera toxins, and so long as the results of various investigators are so contradictory criticism is impossible. We have assumed that our bouillon cultures contain the metabolic products of the cholera bacillus. It is worthy of note, however, that even 5 c.c. of such cultures sterilized by heat injected intraperitoneally failed to produce death. Gruber and Wiener similarly found that the sterilized peritoneal exudation of animals which had succumbed to intraperitoneal injections of cholera bacilli, even when injected in comparatively large doses, had no fatal effect, while equal or smaller doses of the non-sterilized exudation produced death at least at the first transmission.

That a protection against an infection with coma bacilli can be effected by inoculation with sterilized or filtered bouillon cultures has already been shown by others, notably by Vincenzi, Gamaleia, and Klemperer, but we have further shown that this immunity holds good also against the inoculation of the intracellular poison or Haffkine's *virus fort*.

All these experiments throw some doubt on the too narrow or distinctive conception of an intracellular poison, and it seems that within certain limits the virulence of the poison varies with the pathogenic property of the bacillus—that is, with the power of its metabolic toxin. Immunity against bouillon cultures means also immunity against agar-agar cultures—that is, the "intracellular" poison and *vice versa*; and immunity against the latter implies immunity against gelatine cultures, unless, perhaps, these cultures contain an excessive dose of toxin. Immunity produced by any one method employed by us—that is, Haffkine's method or preventive inoculation with bouillon cultures, living or sterile, filtered or not—amounts to immunity against any other form of inoculation, at least so long as we are dealing with the same bacillus.

It is no doubt difficult to explain why an intraperitoneal or subcutaneous injection of "prodigiosus agar emulsion" should protect rabbits or guinea-pigs against an intraperitoneal injection of pyocyaneus agar emulsion, but that it is hardly a question of one intracellular poison against another seems probable from the fact that it is possible, by means of intraperitoneal injections of old bouillon cultures of the bacillus prodigiosus to render rabbits immune against intraperitoneal injections of "pyocyaneus agar emulsion." The whole matter requires further study on broader lines, and this must be left for future investigation.

(10) The following observations also compel us to regard a too dogmatic or systematic distinction between "intracellular" and metabolic poisons in their relation to immunity with some doubt. Guinea-pigs are immunised against "cholera" by various methods, and their serum used to immunise other guinea-pigs. It was found that (1) the serum of an animal immunised by Haffkine's method will readily immunise another guinea-pig against Haffkine's *virus fort;* (2) it will also immunise against intraperitoneal injections of large doses of virulent bouillon cultures. Similarly it was found that the serum of one of us inoculated by Haffkine's method will immunise guinea-pigs against intraperitoneal injections of Haffkine's *virus fort* or virulent bouillon cultures in large doses. It may here be mentioned that it is quite immaterial whether the serum be injected subcutaneously or intraperitoneally, and that large doses of serum (4 to 6 c.c.) often caused severe and extensive ulceration of the abdominal wall when injected subcutaneously. In one case a copious intraperitoneal injection caused death in two days, the animal suffering from the usual symptoms of a subacute intoxication. In all cases, whether our own serum or that of immunised guinea-pigs was used, large doses of serum (2 c.c. and more) caused the animals to be ill and feverish for some time (three or four days). There was loss of appetite, and the coat was rough, and the animals hid themselves in the straw. It is is quite possible, therefore, that the immunising serum contains

some active, if not the specific toxic substance.

11. It was further found that the serum of guinea-pigs immunised by repeated subcutaneous injections of bouillon cultures heated to 65° or 100° C. will immunise others against intraperitoneal injections of large doses of Haffkine's *virus fort* or virulent bouillon cultures.

One of us was treated by subcutaneous injections of virulent bouillon cultures, while at the same time large doses of sterilized bouillon cultures were administered per os, the gastric secretion having previously been neutralized with a solution of carbonate of sodium. In this case also the serum immunised guinea-pigs against Haffkine's *virus fort.* Unfortunately, we ommitted to test the immunising power of our own sera before the auto-inoculations. Klemperer has shown that the serum of some normal individuals has a weak immunising action. It is, however, very slight compared with that of the serum after treatment. Now in our case the immunising power was well marked, since 0.25 c.c. readily immunised guinea-pigs against large doses of Haffkine's *virus fort.* The serum of normal guinea-pigs, so far as our own experience goes, has no immunising action whatever.

12. It should also be mentioned that some of us, having been inoculated with repeated subcutaneous injections of virulent bouillon cultures, subsequently, when his serum possessed marked immunising properties showed only slight local reaction against a large dose of Haffkine's *virus fort* (half tube.) This, again, tends to show that the view of the distinct kinds of poisons should not be taken too narrow.

The above-mentioned serum experiments are possibly of some importance if Klemperer's law of the specificity of immunising serum holds good for all cases. The Klemperers insist on the truth of this law, and Behring agrees with them. According to this law the serum of an animal immunized by inoculations with the bacillus prodigiosus would immunize against this bacillus only, and not against any other infection; and similarly the serum of an animal immunized against "cholera" should not immunize against an infection with the bacillus prodigiosus. This question has also been touched upon; it will, however, require further careful and critical examination, because fallacies may easily be introduced by reason of the fact that the sera also of naturally immune animals have more or less marked immunizing properties.

We have found in accordance with Klemperer's law, that the serum of one of us treated by Haffkine's method will not protect guinea-pigs against intraperitoneal injections of "prodigiosus and pyocyaneus agar emulsions." So far too few experiments have been performed, but if our results be confirmed and Klemperer's experiments with the serum of cholera patients taken into consideration, it would bring us a step nearer the elucidation of the etiology of Asiatic cholera. Judging from Klein's theory of the intracellular poison and from its unequivocal results, we might have expected that the serum obtained from a person treated by Haffkine's method would protect animals against intraperitoneal injections of both "prodigiosus and pyocyaneus agar emulsions," but it was found that such serum will protect against any form of intraperitoneal injection of cholera bacilli only.

Without laying undue stress on the experiments just mentioned, we are led to the following conclusions after a survey of our own observations and those of others. As far as the cholera bacillus is concerned, (1) any one mode of immunisation will protect an animal against an infection by any other form of inoculation used; (2) the serum of an animal immunised by any one method also protects guinea-pigs against an infection by any one of the various forms of inoculation mentioned; (3) the distinction between an "intracellular" and a "metabolic" poision in their relation to artificial immunity must not be made too narrow.

We do not deny that an actual distinction between the metabolic and the protoplasmic poisons exists. Buchner's "proteins" apparently are what Klein calls the intracellular poison, and it is well known, from the researches of Buchner, Romer, and others, that the "proteins" produce reactions often different from those produced by the bacilli and their metabolic substances. Here, also, we must not be too exclusive. Whether Koch's tuberculin belongs to the proteins, as Buchner asserts, seems somewhat doubtful after the careful chemical studies of Hunter, but, on the other hand, it is almost certain that it does not contain the specific toxin, at least not in a potent form. Now Vissman has shown that after injection dead tubercle bacilli scraped off agar agar into the ear vein of rabbits typical tubercles appear in the lungs and liver, which however, show no inclination towards caseation, but rather towards cicatrisation. Unfortunately, Vissmann has omitted to investigate the influence of such intravenous injections on immunity. If, however, as Klein and Buchner assume, tuberculin be the intracellular poison, then Kitasato has shown that by inoculations with this poison it is impossible to protect guinea-pigs against a tuberculous infection —a result which confirms our own conclusion that the "intracellular" poison against the bacillus and its specific toxin. —*Br. Med. Jour.*

IMPORTANT EXPERIMENTS TOWARD MAINTAINING PURITY OF THE MILK SUPPLY.

Though each hot season brings out the truth of the assertion that contaminated milk is responsible for much infant mortality, yet the public is but slowly moved from its attude of indifference. Milk is one of the great foods, more important perhaps than any other, and is our main dependence in most cases of sickness and among the majority of children. The New Jersey commission, who, under the leadership of Dr. Coit, have given much time and thought to the investigation of the milk question, are convinced that a full supply of pure milk, if obtainable, would reduce the number of child deaths in summer one-half. The charitable experiment now being conducted by Mr. Nathan Straus at the foot of East 3d street, and which aims to supply sterilized milk to the poor, is worthy of praise of itself, and as calling public attention to the need of good milk.

Yet prevention is better than cure, and a supply of milk known to be pure would be better than a supply of milk treated to pasteurization for the killing of disease germs. Of course such processes as sterilization are a vast improvement upon the use of an impure article; but it is a question whether our real relief should not be sought in the direction of keeping the original purity of the milk intact rather than in destroying the bacilli after these have taken possession, since the process also takes from the milk something of its value as food. The important inquiry is whether this orginal purity can be maintained; and it is upon this point that the experiments of the New Jersey commission have much interest. No bacilli have ever been found in milk as it comes from the cow; yet in a single drop kept warm for two hours, 2,500 germs were found. That is to say, Nature will furnish the food absolutely pure when taken from healthy animals under proper feeding; it remains for the wit of man to keep it so. This is clearly a difficult thing to do. The hands of the milker, the udders of the cows, the hay and straw of the barn, the nuisances of the stable, may develop the dreaded germs. Just because milk is so important and composite a food, it the more readily becomes the carrier of disease. The theory of Henry L. Coit, M.D., adopted by the New Jersey commission, is that the problem must be solved by the application of medical, chemical, and agricultural expert knowledge to the production of milk on the farm and its transportation to the consumer. Experiments on these lines are now being conducted at a model farm near Caldwell, N. J. If it can be shown by these rigid experiments that milk which shall be free from germs can be obtained and delivered pure to infants and invalids, the way will be open for a practical reform. Boards of Health and the medical profession generally will watch the results with great interest and hope. The investigation is being conducted by a committee who deserve the confidence of the public as disinterested men (they receive no compensation), and as scientists whose opinions can be relied upon.

One thing we must not shut our eyes to. Pure milk, like any other good thing of importance, will, when obtainable cost money and time. Dr. Coit says that the present laws of New Jersey are sufficient in our present state of knowledge, if they were but enforced. Enforced they will not be until public opinion is aroused to the importance of a supply of pure milk. Moreover, the process of obtaining milk under stringent regulations is more costly than the old slip-shod methods, and that extra cost must be paid by somebody. It is believed that this milk, certified to be germ-free and delivered in sealed bottles, can be sold for 12 cents per quart, though this is not yet certain. In Mr. Straus's charity, this extra cost is borne by the originator, the sterilized milk being sold at a little below first cost. If the State, for the protection of the people, should insist upon the rigid regulations which the Caldwell experiments may prove sufficient for purity, the result would be a general rise in price. At present the milk farmers of New York and New Jersey barely cover expenses in the low price which they are obliged by the competition with each other to take. They cannot feed better fodder to their cows or take more precautions against germs or uncleanness, unless they receive a cent or two more per quart.

In spite of this obstacle of increased cost, which must be settled in some way in the future, the first question to be solved is whether purity in our supply can be obtained and kept by any means. It is this question which the New Jersey commission, to their credit, are attempting to answer. After we know the solution, we shall be in a position to consider whether the State should not undertake to secure pure milk through the enforcement of existing laws under a competent comission, and whether the several commonwealths which furnish New York City with milk cannot agree upon the precautions to be insisted upon.—*New York Evening Post.*

LEAVING CHILDREN TO THE CARE OF NURSES.

There is no duty of the mother so important, so sacred, as that of personally caring for her children, especially when they are very young. Duties to society, to education, to philanthropy, should all be secondary to this home duty.

When excuse can be offered for the woman who hires a nurse for her children and then gives up her time to so-called duties and pleasures which call her outside her home and away from the supervision of the nursery? It is not easily possible to secure for money, however liberally one may be able and willing to spend it, a person who will equal in refinement and education the child's own mother.

The care of children has been regarded as one of the lower occupations, and few educated girls will take the position of a nurse. Yet the brain and the thought-power of a child develop far more rapidly during the first two years of life than at any later period, and the child's disposition may be easily spoiled by injudicious handling. The difference between a fretful, cross child, making himself a nuisance to all around, and a sweet-tempered, laughing baby, is largely a matter of regularity and careful management. The impressions received, the language spoken, and the directions taken by the child's mind, are those of the persons with whom he comes most in contact. It is for this reason that French and German nurses are often sought, that the child may easily and naturally learn a foreign language. One hour with the mother will not counteract the effect of twenty-three hours with the nurse. Even granting that the care of an intelligent nurse over the physical wants of a child is of more value than that of the mother (which I do not believe), the direction of mind is far better taken charge of by the mother. This is not advocating a precocious education for the baby, but simply that the budding mind may have the best atmosphere to unfold in.

Let me give a few examples of the false impressions that the little ones often receive from their nurses. Many children live in constant terror of the "bugaboo" who catches naughty ones in the dark, or the man under the bed who will come out after them if they are left alone. Or they are taught to fear mice, spiders, worms and other harmless lower animals. This fear is never natural to children, but is taught them at so early an age that they seem to have been born with it. A little child who sees a worm for the first time feels only interest and curiosity about it. He laughs, and wants to put his finger on it, to see how it feels and what it will do. Some ignorant person says, "the worm is nasty" or the worm will bite you"—and the child ever afterward fears that he may be bitten or poisoned by a creature that has no weapons against the human race, and whose habits are intensely interesting to many older as well as younger people. There is nothing more ridiculous than to see a girl scream and run away from a tiny spider. I know a lady who was laid up three weeks with a sprained ankle, the result of her frantic attempts to escape from a little mouse, who was doubtless more frightened than she. Yet I cannot remember the time when I had the slightest fear of any of these creatures. My mother taught me that they were harmless and interesting. Teach a baby under two years this fearlessness, and his mind will never be influenced against his early teachings.

Little children are naturally cruel from ignorance, and need a gentle mind to teach them that an insect or a kitten can feel pain as well as they. The girl, at six years old, who drags her kitten around the yard by a string tied round its neck, began with a nurse who did not teach her to care for and protect all beings weaker than herself.

Can we trust the nurse to guide and develop the early sense of right and wrong? Too often she comes from a family or a race in which these distinctions are far from clear in the minds of the elders. The child soon learns that nurse does not always tell the truth, that her word cannot be depended upon, and he naturally imitates her in this respect. We see little children pushing one another away from the best place, seizing the best piece of cake or the largest orange. It is but natural to the human mind. But this little seed grows into the great tree of selfishness and carelessness of the interests of others, of which we see so much in adults. Some children scream and howl whenever their wills are crossed in any way. A firm hand to break this habit means comfort and peace for the family in the future. These lessons of fearlessness, of unselfishness, of kindness and of self-control cannot be learned too early. The child who lacks these lessons develops into an excitable, high-strung, nervous being, a curse to himself and a constant anxiety to his parents.

Let us turn to the physical side of the baby's nature. If it were the custom to train young women to the care of well children, as it is to train them in the care of the sick, the nurse might be trusted with their physical welfare. But, unfortunately, our nurses are trained by experience only. All that is necessary is for a young woman to decide that she likes the care of children, and to present herself before the public in that light, to have her received, into some unsuspecting person's family and given the care of young children. She is probably ignorant of the rules of hygiene, of the needs of fresh air, and the ways of ventilating a room without a draft, of the proper temperature at which to keep her nursery, and the best ways of feeding children. She has seen her small brothers and sisters sit up all hours of the night, eat anything they can lay their hands on, and at any time they see fit to want food, and tumble about the floor as they like. These plans tried on her new charges soon bring about indigestion, bronchitis or irregular habits of sleeping. The results are but natural. In the absence of her mistress, she corrects her little charges at will; they learn to fear a blow, or to scream for whatever they want. The foundations are laid of ill-health and an excitable, unstable, nervous condition, which has much to do with the prevalence of nervous diseases in later years.

Am I depicting an extreme case? Then modify it for yourselves, and fill in the picture with other details. Let us take an "experienced" nurse. Can you safely trust her discretion in the matter of taking the children out in all weather and to all places? I know of a nurse who took two children, two and a half and five years old, to her home, where her father lay in bed, sick with smallpox. It was only by the description by the older child of "a man with sores all over his face" that the horrified mother learned where her children had been. The nurse had been so used to the presence of smallpox in a southern city that she knew no better. Many of the nurses whom I see on th street are attending far more to gossip about their own affairs than to the welfare of their charges. If we fear to entrust our valuable bric-a-brac to the care of servants, how much more precious are these troublesome little comforts?

Then watch over your nurse in season and out of season; study hygiene and diet; find a physician not too busy to talk over these subjects with you, and let him teach you how to keep your children well, instead of coming to them only when they are sick; and never let your nurse think she knows more than you do about the care of children. Spend as much time as you can possibly arrange with the children, and leave some of the cares of society and of charity to the women who have no "little darlings." A physician's wife said to me the other day, "I fear I shall not have time to come often to the club, as I am one of the mothers who are old-fashioned enough to take care of their own little girls." I went away, thinking what a sensible mother she was. Above all, teach your children to love you most of all, and not to cling to the nurse in preference to you. This will take time, but in it lies the hope of making them healthy, hearty and pure-minded.—*Mother's Nursery Guide.*

ASIATIC CHOLERA IN ENGLAND.

The official notifications made during the past week prove beyond a doubt that our first line of defense has been forced, and that cases of Asiatic cholera have occurred in Hull and in Grimsby, not among ships' crews, but among permanent residents. The first recognized case was of a boy in Hull, on whom an inquest was held on August 25th. The inquiry was adjourned, in order that a bacteriological examination might be made. The material was transmitted to Dr. Klein, into whose custody it came on August 28th. Cultivations were immediately made, and on the following morning, August 29th, the sanitary authority in Hull was informed by telegraph that the case was undoubtedly one of Asiatic cholera. At the same time the information was transmitted to the Local Government Board, who at once despatched Dr. Thompson to Hull. As suspicious cases had occurred in Grimsby, where diarrhœa had been prevalent severely for several weeks, Dr. Reece was directed to proceed to that port. On August 30th a woman died with typical symptoms of cholera; a *post-mortem* examination was made, and Dr. Reece returned to London with a part of the ileum and some typical rice-water stool from this case. Cultures made from these specimens gave, after the usual intervals of about twelve hours, typical growths of the vibrio of Asiatic cholera, and on August 31st a telegram was despatched to Grimsby to this effect. On the following day, September 1st, similar materials were received from a second case which had been subjected to *post-mortem* examination on that day. The cultivation test again gave unmistakable evidence of Asiatic cholera, and the Grimsby authorities were so advised on September 2nd. Meanwhile a woman who lived in the same street in Hull as the boy upon whom the inquest was held on August 25th had been taken ill, and died. A *post-mortem* examination was made on the same day; the cultivations again gave unmistakable evidence of Asiatic cholera. This case gave rise to a third, the woman's daughter, who, on receipt of the news of her mother's illness, went to nurse her, was taken ill within twenty-four hours, and died with symptoms of Asiatic cholera.

Since then other cases have occurred in Hull and Grimsby, which have presented symptoms pointing to Asiatic cholera, although the diagnosis has not been confirmed by bacteriological examination. Elaborate precautions are now being taken in both of these ports, but it cannot be denied that the position remains serious. The Mayor of Grimsby has addressed a letter complaining that exaggerated statements have appeared in the press, and that, "whilst Grimsby is sparing no expense or trouble in adopting the most stringent measures to prevent the introduction of cholera into this country, it is being ungenerously and cruelly treated in return."

It is inevitable, however, that considerable alarm should be felt throughout the country, although we are glad to recognize that there are no signs of panic. At the same time we learn with some surprise that the railway excursion traffic to Cleethorpes, which is a suburb of Grimsby, has not been stopped, although it seems to be made a matter of complaint that it has been perceptibly affected, the number of excursionists being several hundreds below the avarage.

It is astonishing to learn that the efforts of the Rotherham Corporation to induce the Manchester, Sheffield, and Lincolnshire Railway to abandon a special excursion train to carry people from Grimbsy to Rotherham, to attend a football match, have been unsuccesful. The reason alleged is that there is no serious epidemic at Grimsby. The infection of Asiatic cholera is present in Grimsby, and Asiatic cholera, whatever the dimensions of the epidemic may be, is always serious.

That the continuance of excursion traffic may facilitate the dissemination of the disease is shown by the history of the case of Asiatic cholera which has occurred at Rotherham. The patient was a miner, who we learn, visited Grimsby on September 4th; he was taken ill on September 5th, and died the same day. Bacteriological examination proved that he had been suffering from Asiatic cholera.

Without wishing to bear hardly upon the sanitary authorities of Hull and Grimsby—brought face to face with a serious emergency the significance of which there may have some natural indisposition to recognize—we cannot help feeling that they would have been well advised to have had recourse at an earlier date to the bacteriological method of diagnosis.

Our Special Commissioner, who has visited Grimsby, furnishes us to day with facts which afford grounds for at least a strong suspicion that some of the cases of "cholera" and "diarrhœa" which occurred during the third week in August may have been really due to Asiatic cholera. Since August 20th 20 deaths have occurred in Grimsby from acute forms of diarrhœa, of which 18 have been returned "cholera" or "choleraic diarrhœa." The mortality, as our Commissioner points out, was high, and might well have aroused suspicion. The precautionary measures now in force are admirable, but it is possible that, had a bacteriological examination been made a week earlier, they might have been then enforced with the effect of saving life and protecting the trade of the port of Grimsby from the serious injury which it is inevitable it must now suffer.

In the *British Medical Journal* of July 26th was published an article on the examination of cholera discharges, which explained fully the methods now in use in bacteriological laboratories, and we mentioned then the names of various laboratories in this country in which bacteriological work is carried on and in any one of which the necessary examination would, we have no doubt, be promptly made. It may be well to add that the best material to forward is either some of the rice-water stool, or, if the case has terminated fatally, a portion of the lower ilium about eight or twelve inches in length. If a specimen of the stool is sent it should be put in a glass stoppered bottle, previously washed out with spirit, and the stopper tied down and sealed. If a piece of the ileum be sent it should be tied above and below and placed in a wide-mouthed glass stoppered bottle, previously washed out with alcohol. In neither case should any preservative or other fluid be added to the specimen contained in the bottle. The bottle should be thickly wrapped in cotton wool and packed in a tin box. If no specimen of the stool or the intestine can be obtained a portion of a sheet soiled by the discharges should be cut out, folded, wrapped in guttapercha tissue enveloped in cotton wool, and packed in a tin box.—*Br. Med. Jour.*

METRICAL EQUIVALENTS. The metric nomenclature is coming into such common use, especially in scientific articles, that the following formulas will be found valuable:

WEIGHT EQUIVALENTS.

To convert grains into grammes multiply by......	0.065
To convert grammes into grains multiply.........	15.5
To convert drachms into grammes multiply by...	3.9
To convert ounces (avoir.) into grammes multiply by......	28.4
To convert pounds (avoir.) into grammes multiply by	453.6

MEASURE EQUIVALENTS.

To convert cubic centimeters into grains multiply by	15.5
To convert cubic centimeters into drachms multiply by	0.26
To convert cubic centimeters into ounces (avoir.) multiply by	0.036
To convert pints into cubic centimeters multiply by	473.
To convert liters into ounces (avoir.) multiply by	35.3
To convert gallons into liters multiply by.........	3.8

—*Scientific American.*

CURRENT LITERATURE REVIEWED.

THE ANNALS OF GYNECOLOGY FOR SEPTEMBER.

The Operative Treatment of Backward Displacements of the Uterus

is the title of a paper contributed by Dr. Ernest W. Cushing. After reviewing the various operations proposed for the relief of the condition, the author presents the following conclusions:

1. That many cases of retroflexion, and most cases of retroversion, if uncomplicated, cause little serious disturbance, and require no operative treatment.
2. That severe retroflexion in the virgin, when giving rise to symptoms sufficiently severe to call for treatment, is best relieved by operation.
3. That cases of retroversion which cannot be made comfortable by simple measures, such as the use of a pessary, are usually obdurate, on account of some complication which requires operation.
4. That of the operations designed for the cure of retro-displacements, the only ones worth considering are the Alexander-Adams operation, the various methods of intra-abdominal shortening of the round ligaments, and ventro-fixation.
5. That there is a legitimate and useful field for Alexander's operation, subject to the following limitations: The uterus must be free, the diagnosis must be exact, the anatomical conditions must be favorable.
6. That when these conditions are not present it is better to make a median abdominal incision and act according to circumstances.
7. That after opening the abdomen, if no complications are present, the uterus may best be secured in ante-position by shortening the round ligaments internally, and by placing at each cornu of the uterus one suture which passes through the abdominal wall.
8. That the latter operation may properly be performed instead of that of Alexander if the surgeon prefers it, as it is equally safe and more reliable on the average.

Dr. C. D. Hurt contributes an article on

The Etiology of Puerperal Eclampsia; Its Treatment.

After reviewing the various theories as to the causation of the convulsions the author says, in regard to treatment: If the increased sensibility is from an over-supply of nerve-force stored away for the woman in parturition, then veratrum and chloral are indicated. If a plethoric condition, the veratrum and venesection. If a truly anæmic and impoverished condition of the blood, then morphia and aromatic spirits of ammonia, with cautious use of veratrum. To secure prompt and decided relief when treating eclampsia, whether uremia is or is not present, unless the patient is very anæmic and with a broken down constitution, the author would. if she is of a full habit, draw twelve to twenty ounces of blood, then use hypodermically ten to fifteen drops of Norwood's tincture of viratrum viride; then order a quart of warm water thrown into the rectum. If the convulsions are post-partum he would first use the viratrum and warm enema, and see that the bladder was well emptied. The author states that he has resorted to chloral and chloroform and would by no means ignore these. He dislikes the use of morphia because of its tendency to check the secretions. Apomorphia he believes to be valuable in many cases but he has had but little experience with it.

Dr. Herman L. Collyer discusses the

Treatment of Vaginitis by Peroxide of Hydrogen.

The author states that he has been able to cure his cases more speedily by its use than any other means that he is aware of. It is his custon in the treatment of a case of vaginitis (purulent), first to wash the parts with warm creolin water in the strength of half a drachm to the pint, getting rid of all the secretion possible; then through a glass or rubber cylindrical speculum to thoroughly wash out the vagina. He uses peroxide of hydrogen (medical) plentifully, either full strength or diluted with luke warm water, and rubs the surface with a pledget of cotton, withdrawing the speculum at the same time (but not allowing it to come out) so as to allow the peroxide to get deep into the crpyts, destroying the pyogenic membrane and the gonococci, if any have imbedded themselves in the epithelium: he treats the vagina throughout in this manner, and also the vulva, especially in the folds of the labia and the orifices of the Bartholin ducts. Having destroyed every vestage of the pus with the peroxide of hydrogen, he pours into the speculum about an ounce of a solution of nitrate of silver, half a drachm to the ounce, and coats the denuded membrane throughout, inserting a strip of iodoform or aristol gauze to keep the parts separated, swabbing the external parts with the same solution, fifteen grains to the ounce. This process is repeated every second or fourth day, as the case demands. The patient is instructed to remove the gauze on the following day and to use, in acute attacks, a cool, weak solution of the lotion plumbi et opii or a solution of muriate of ammonia two or three times a day. When the symptoms become milder, the use of astringents is necessary. In specific vaginitis the endometrium and the urethra have often become effected, and these cavities are treated in the same manner, of course observing the precautions necessary for each, in all cases securing free drainage.

Dr. J. A. Prince contributes a paper on "Prolapsus with Retro-deviations of the Uterus treated by Ventro-fixation." After reporting a number of cases the author concludes as the result of his experience that the operation is justifiable in many cases.

In the department of Pædiatry, Dr. Eugene Revilliod presents some "Clinical Notes on Nephritis as met with in Children."

In summing up he says that nephritis is often a primary disease in childhood; the cause may often be found in the influence of cold, but often there is to be found no circumstances capable of explaining its origin. The most frequent form, from a clinical point of view, is the acute; from an anatomical point of view it is the mixed. Albuminuria is an almost constant symptom. The quantity of albumin is most variable. It may be very abundant in serious cases. Slight nephritis may also give a large quantity of albumin in the beginning, but the quantity rapidly decreases. Anasarca is a less constant symptom than albuminuria, and collections in the serous cavities are rare. The complications that he observed could, in about all the cases, be attributed to the initial disease. This was the case especially with pleuro-pneumonia, several cases of endo-carditis, one of rheumatism, and two of peritonitis.

Dr. Henry N. Cattell contributes a paper entitled "Some Special Points on the Performance of Autopsies on the New-born."

The other contributions in this issue are: "A paper on Extra-uterine Pregnancy" by Dr. A. H. Cordier. "A Useful Addition to the Edebohl's Operating Table" by Dr. I. S. Stone. "The Treatment of the Retroverted Uterus, with special reference to the Value of Massage and the Author's Application of the Uterine Respiratory Movement," by Dr. D. H. Williams, and "A Favorable Termination of a much neglected case of Suppuration of the Appendix Vermiformis," by Dr. Z. H. Evans.

THE UNIVERSITY MEDICAL MAGAZINE

for September. Dr. John B. Deaver furnishes an interesting paper on

The Treatment of Appendicitis.

He proposes that the term intra-peritoneal inflammation should include all cases of inflammation in the right iliac fossa having their origin within the peritoneum and associated with lesions of the cecum or the appendix, for the following reasons: (1) He believes it impossible to differentiate between appendicitis, typhilitis and peri-typhlitis; (2) He believes the terms typhlitis and perityphlitis to be misleading, and as long as it is taught that they are distinct affections, independent of trouble with the appendix, just so long will the physician be misled as to the true character of inflammation in this region. He asserts that all inflammations of the right iliac fossa, excluding inflammatory affections of the overlying abdominal muscles, have their starting point in the appendix. All cases of appendicitis are divisible into five classes: catarrhal, obstructive (due to the presence of a foreign body, as a fecal concretion, an enterolith, a stricture, etc.), perforative, tubercular and relapsing.

The treatment which offers the best opportunity for permanent relief is that of immediate removal of the offending appendix as soon as the diagnosis is established. His reason for adopting such a radical course has been forced upon him by the large number of cases he has seen perish when well-directed medical means had failed to afford relief, many of the patients being beyond surgical aid. While he has seen cases of acute appendicitis recover without operation, this has not been the rule, but the exception. Furthermore, being unable to subsequently observe the cases supposed to have recovered without operation, it is impossible to estimate how many of these suffered from relapses. If reliable statistics were available upon this point an arbitrary rule could be made.

The points he observes in making the incision for the removal of the appendix in acute cases where there is present a mass, be it pus or exudate, are the following: When the loin is rendered prominent by the mass or is the seat of edema, he takes it as an indication that the appendix holds a post-cecal or an external antero-lateral position or that it comes off from the apex of the cecum, and he carries the incision parallel with and a short distance above the outer third of Poupart's ligament, prolonging it outward if necessary. When the mass presents itself well to the inner side of the anterior superior spine of the ilium, he carries the incision through the semi-lunar line, rather through the rectus muscle immediately to the inner side of the semi-lunar line. The wound, when carried through the muscle, heals more solidly and, therefore, there is less likelihood of the development of a ventral hernia than when made through the semi-lunar line.

In concluding the paper he cautions against operation, when time is not an element, until the patient has been thoroughly prepared, that is, by rest in bed for two, three or more days, a limited but nutritious diet, and, most important of all, the free evacuation of the bowels. In acute attacks of appendicitis he always feels that the operation is certain to be a success if the patient has had two or more free evacuations during the day of operation; while, on the other hand, in acute cases when the bowels have been kept locked up with opium, he never feels sure of the result.

Dr. Joseph McFarland discusses the question

Are Coccidia Found in Cancer?

After carefully reviewing the opinions of the observers and workers in this subject, he deduces that from all the evidence, we are obliged to conclude that the bodies found in cancer cells and described as parasites, are not of such nature, but are phenomena occurring from disease and degeneration of the cells, and have nothing to do with the etiology of cancer. While he does not deny the possibility of the presence of animal parasites as well as bacteria in the ulcerated and degenerated portions of epithelial tumors, he is obliged to regard even this as unproven.

Dr. John C. Heisler contributes a paper on

Cystitis in the Female.

In almost every case, certainly in the majority, careful inquiry will disclose some error in diet or defect in digestion. Prominent among the former, is the habit of partaking freely, almost inordinately it may be, of acid fruits and of highly stimulating condiments. The sparing use of drinking water may be, at least, a powerful predisposing cause of bladder irritation, and if the patient is a heavy feeder, or is addicted to the free use of acids and condiments, will certainly very greatly aid in producing the disease. Gastric digestion, intestinal digestion and bowel evacuations having each received the physician's attention, he may next proceed to a physical examination of the pelvic organs. Whether there is flexion, version, descent, or other morbid condition of the uterus, should be noted, as well as the state of the ovaries. Tenderness of the urethra should be inquired for, by passing the finger along the roof of the vagina with slight pressure. It should be borne in mind that anything keeping up pelvic congestion will interfere with the cure of the cystitis. That microscopical and chemical examination of the urine should always be made, goes without saying.

The chief indications for treatment are: (1) To remove any discoverable source or sources of irritation; (2) to render the urine bland; (3) to relieve pelvic congestion if it exist; (4) to treat locally the inflamed mucous membrane; (5) to improve the patient's general health; (6) to secure rest for the patient by keeping her in bed, at least in all acute cases.

The remaining paper is by Dr. James Wallace on "Glaucoma." In the clinical department is the report, by Dr. Francis Lieber, of the fractures treated in the dispensary of the Episcopal Hospital during the service of Drs. Davis and Van Pelt.

PERISCOPE.

MEDICINE

Embolism of the Popliteal Artery Following Diphtheria.

Rooney (*Occidental Medical Times*, April, 1893) reports a case of diphtheria which was followed by embolism of the left popliteal artery. Gangrene resulted, the line of demarcation extending obliquely from the patella in front downwards and backwards to the top of the belly of the gastrocnemius. Amputation through the thigh at the junction of the lower and middle thirds was performed, and the patient recovered.

Epilepsy.

Miller (*Edinburgh Medical Journal*, July, 1893) reports a case of epilepsy which was cured by the removal of a contraction of the slips of the palmar fascia going to the ring and little fingers of the right hand, and also the slitting up of a contracted prepuce. The fits used to commence by the fingers of the right hand becoming flexed, with the thumb over them; the arm then became flexed until the hand touched the shoulder. The rigidity extended to the right leg, and then became general, the patient losing consciousness. Some months after the operation the patient reported himself quite well.

Bathing After Excessive Exercise.

The popular notion of the injurious effect of a cold bath taken by one who is overheated from exercise, must possess—as all such ideas have—some basis in experience; and yet it is falsified by the experiences of athletes from the days of the Greeks and Romans even until now, who find in this procedure a refreshing and stimulating tonic after the exertion they have recently undergone. And, physiologically speaking, a cold plunge or douche taken immediately after the physical effort, when the skin is acting freely and there is a sense of heat throughout the body, is as rational as in the experience of the athlete it is beneficial. It is paralleled by the tonic effect produced by the cold plunge when the skin is actively secreting after a Turkish bath, and finds its rationale doubtless in the stimulation of the nervous system, in the increase of internal circulation, and also in the renewal of activity to the cutaneous circulation after the momentary contraction of blood vessels due to the cold. The popular belief, doubtless, rests on the injurious effects which may be induced by the bath in one who does not resort to it immediately, but allows time for the effects of fatigue to show themselves on the muscles and nerves and for the surface of the body to get cool. Taken then the bath is more likely to depress than to stimulate, there is less power of reaction and greater liability to internal inflammations. At such a time a warm bath rather than a cold one is more suitable and more safe. It has been suggested, however, that the practice of indulging in a bath after violent exercise may initiate renal disease. Of this there is no evidence. The transitory albuminuria observed after prolonged cold baths may indicate the disturbance in the renal circulation which ensues upon them, but these cases are in a different category from those to which we are now alluding, nor are we aware of any facts to prove that even in them Bright's disease has been developed in consequence of the transient departure from the normal. Lastly, it must be remembered that those indulging in athletic exercises of all kinds are presumably sound in heart as well as limb, and that such persons may take with impunity, and, indeed, with benefit, measures which would be distinctly harmful to the weakly.—*Lancet.*

Diabetes and Cirrhosis of the Liver.

Palma (*Ber. klin. Woch.*,)describes two such cases from cases from the clinic of v. Jaksch.

(1) A man, aged 78, had suffered from increasing weakness for eighteen weeks. The skin was of a brownish color. There was considerable hepatic and splenic enlargement. The urine contained much grape sugar, but no bile pigment. The case is described as one of hypertrophic passing into atrophic cirrhosis. (2) A man, aged 43, began with slight jaundice four months previously. Two months later the abdomen began to swell, and, fourteen days ago, the legs. Ascites was present. The liver and spleen could not be felt. The urine contained grape sugar and occasionally, acetone, as well as bile pigment. A month later he died. The liver was found to be cirrhotic, the kidneys enlarged, and the pancreas healthy. The liver only contained a small quantity of glycogen. In such cases either the sugar-forming function of the liver is increased, and too much sugar gets into the blood, or the liver is not in a position to convert the sugar brought to it into glycogen. The question of alimentary glycosuria must also be considered. Here the limit for the assimilation of carbohydrates is diminished, and a permanent glycosuria may result. The effect of alcohol in this respect has been insisted on. The author draws attention to the pigmentation seen in his case, and refers to the condition of "bronzed diabetes." He concludes by pointing out (1)that the cœxistence of these two diseases is very rare; (2) that the liver disease cannot as yet be looked upon as the cause of the diabetes, and that the latter may be a chance complication; and (3) that the name bronzed diabetes should not be used, as pigment may be absent from the internal organs in such cases, and in ordinary cirrhosis without diabetes this accumulation of pigment may also be present.—*Br. Med. Jour.*

Relation between the Alkalinity of the Blood and Intestinal Absorption.

Castellino and Cavazzani (*Gaz. degli Ospitali*,) have sought to ascertain whether, and if so how, the process of absorption from the intestine is modified in association with altered physical and chemical conditions of the blood; secondly, they have sought to establish how such changes of the blood influence in the human subject the general metabolism of the body. The study is not as yet complete, but the authors have ascertained the following facts: In distinctly alkaline serum, the reticulum of the hyaloplasm of leucocytes undergoes stimulation, which causes increased irritability and more active vital manifestations in the protoplasm. In liquids poor in alkali the protoplasm appears torpid and slow in its reactions, but in these cases contact with alkaline serum speedily evokes increased activity; Contact of faintly alkaline serum with leucocytes in a medium favorable to their activity depresses their movements, and accelerates the processes of degeneration. Serum which is but faintly alkaline nearly always produces transparency of the protoplasm, and throws out the nucleus. From the above facts, the authors argue, first, that alkalinization of the blood favors intestinal absorption; and, secondly, that as the passage of foods from the intestine through the lining mucous membrane is probably due in great measure to the activity of the cells lining the villi and to the leucocytes, alkalies would cause an increase in the rapidity of absorption by stimulating the activity of the protoplasm, and increasing its chimiotactic powers.

Double Empyema.

Cassel (*Deut. Med. Woch.*) reports a case in a wasted child, aged four months, who was thought to have had an attack of influenza. On the left side there was well-marked bronchial breathing at the angle of the scapula behind, and from this point downwards on both sides the percussion note was impaired and the breath sounds ill-defined. In front there are no abnormal signs, and the apex beat was not displaced. The chest was opened on both sides in the sixth interspace, ¾ litre of pus being let out on the right, and ⅓ litre on the left side. The immediate result was good. The improvement was not maintained, so that resection of rib was practiced. The child died later. Pleuritic adhesions were found everywhere except at the sites of the empyemata. A vomica was found in the left lung communicating with the pleural cavity. Many tuberculous foci were found scattered through the lungs. Double-sided pleurisy is not so very rare. The only treatment that could be practiced here was opening the chest. Tuberculosis of the lungs may, however, be a contra-indication. At this age the recognition of a tuberculous lesion in the lungs would necessarily be very difficult.

Syphilitic Spinal Paralysis.

Kowalewsky (*Neurol. Centralbl.*) reviews the clinical features and differential diagnosis of the affection described under the above title by Erb and designated syphilitic transverse myelitis by Charcot. The disease is almost confined to males between 30 and 45 years of age; its development is slow; disturbance of the bladder function is often one of the earliest indications. Frequently, in addition to symptoms resembling spastic paraplegia, there are sensory disorders of diverse kinds, sometimes with trophic derangements. Spasticity of gait, however, is not always observed, and never is so marked as in lateral sclerosis; muscular rigidity and increase of deep reflexes also are less pronounced than in spastic paraplegia. Amongst 152 cases of syphilis of the central nervous system treated by the author during 1892 there were 38 affected with tabes and 21 with syphilitic spinal paralysis. In all the latter there was functional derangement of the bladder, mostly shown by inability to restrain detrusor action whenever the desire to micturate arose. The rectal function was similarly deranged in many of the cases. Increased myotatic irritability was a constant condition. Great exaggeration of the "thermic reflex" in the lower limbs was found to be a characteristic peculiarity of the disease; cold or heat applied to the lower extremities evoked strong convulsive contraction. The psycho-physical reaction time for tactile and painful stimuli was normal or slightly shortened—an opposite condition to that obtaining in tabes.—*Br. Med. Jr.*

Large Doses of Digitalis in Croupous Pneumonia.

Mario Bellotti (*Gazz. degli Ospitali*) treats of the virtues of digitalis in croupous pneumonia, the present paper being a continuation of a similar one published a year ago. His conclusions from a large number of observations on cases in which Fraenkel's diplococcus has been detected are as follows: (1) All cases of fibrinous pneumonia, due to Fraenkel's bacillus, receive very great benefit from large doses of infusion of digitalis, always accompanied by milk diet, and occasionally by bleeding. (2) It is necessary to give the digitalis in very large doses, because in pneumonic conditions, both the gastric catarrh which is usually present, and the dimunition of HCl of the gastric juice reduce greatly the amount of the drug which actually passes into the portal circulation. (3) Some of the active principles of digitalis seem to exercise a special elective action on the pneumonia toxins, this action taking place chiefly in the liver.

Artifical Delivery in Copenhagen.

Th. Hansen states that in Germany, after the introduction of antiseptics, accoucheurs seem to have been more disposed to resort to artificial delivery, the mortality being thereby increased. This is not the case in Denmark. Hansen has consulted the registers of the midwives of Copenhagen, who are compelled to register every delivery in their practice, and who attend all women in labor, and has compared the number of artificial deliveries, in that city from 1862 to 1869, with those made from 1888 to 1890. The following are his figures:—

	Deliveries.	*Forceps.*	*Version.*
1862–69	17.887	305 (1.71 per ct.)	120 (0.67 per ct.)
	Deliveries of Placenta.		*Artifioial Deliveries.*
	132 (0.74 per ct.)		557 (3.10 per ct.)
	Deliveries.	*Forceps.*	*Version.*
1888–90	16 639	275 (1.65 per ct.)	70 (0.42 per ct.)
	Deliveries of Placenta.		*Artificial Deliveries.*
	115 (0.69 per ct.)		460 (2.77 per ct.

—*Hospitals-tidende*, 1893, p. 476.

Myositis Ossificans.

A case of myositis ossificans, in a young man of 20, is reported by Brennsohn. Many muscles were involved including those of the back, the boundaries of the axillæ, the deltoids, serratus magnus, biceps, brachialis anticus; neck muscles, abdominal muscles, and those of the thigh.—*Berliner klinische Wochenschrift*, November 14, 1892.

Complete Reunion of Severed Fingers.

Finney sutured the ends of the ring and middle fingers in place seven hours after they had been cut off by a machine. Firm union took place within two weeks. When seen, at the end of three years, motion and sensation were complete. Antiseptics were avoided because they form a thin layer of coagulation-necrosis, which might interfere with union.—*Johns Hopkins Hospital Bulletin*, October. November, 1892.

SURGERY.

Operation for Umbilical Hernia on the Newborn Child.

Berger (*Nouvelles Arch. d'Obstet. et de Gynec.*) successfully operated on a female child thirty hours after birth, and exhibited it afterwards at a meeting of the Obstetrical and Gynecological Society of Paris. The infant was born strong, breathing well. The umbilical hernia was of the size of a small hen's egg, and covered by the membranes of the cord. There was a distinct neck or pedicle as thick as a man's forefinger, and made up of integument alone, which was united to the membranes by a deep groove. The lower part of the hernia was reducible, and the sac was there transparent. Coils of small intestine showed through it; they could all be pushed back into the abdomen. The upper part was irreducible, and in close relation with the vessels of the cord. After birth the hernia and abdomen were well washed and dressed with iodoform. On the next day the hernial sac was opened, and the small intestine reduced. The irreducible portion consisted of the cæcum, the appendix, and about one-third of the large intestine, all intimately adherent to the membranes of the cord. A layer of these membranes had to be detached and reduced, together with the bowel. This manœuvre could not be done until a free incision had been made along the median line, as in abdominal section. The sac was excised. The peritoneum, the aponeurosis, and the skin were separately sutured. The operation lasted an hour and a quarter. The sutures were removed on the tenth day; recovery was complete at the end of a fortnight. Gueniot, in the discussion on Berger's case, referred to Lindfors's invaluable monograph "On Umbilical Hernia," which appeared last January in Volkmann's *Vortrage*. He said that, as in adults, very minute particulars of each case of this operation in infants would be needed. Nothing differed so much as two umbilical herniæ. Other abdominal viscera besides the intestine may lie in the sac, inseparably adherent, and the abdominal cavity may, by congenital defect, be much too small to hold all the herniated structures.

NEWS AND MISCELLANY.

Gulling the Public.

A recent trial has again brought this subject into the newspapers, and has let some light into the inner working of so-called "cures" for consumption, and into the methods by which "cases" are worked up, the books and pamphlets "puffed" by even respectable newspapers.

The whole story is pitiably sad. At one time a respectable medical practitioner deviates from the path of rectitude, is guilty of "infamous conduct in a professional respect," and his name is removed from the Medical Register. A book is then published called "Prevention and Cure of Consumption." This book is just as valuable as all these kind of books are, and the medicines they recommend are not worth the paper they are wrapped up in. But there are plenty of interested people, including proprietors of newspapers, — especially religious newspapers,—ready themselves to puff such books or to introduce into their pages mendacious advertisements. Such books and medicines are not only useless, but they are dangerous. It was said by the defendant, who ought to know, seeing he had been "dispensing the medicine for 15 years," that the medicine contained "enough strychnine to kill 2,000 people in a year, also morphia and chloroform."

The presiding Judge—Mr. Justice Wright —showed more than usual common sense in medical matters, as will be seen from the following cross-examination:—

Upon taking his seat his Lordship inquired whether the plaintiff was in court, and counsel replying in the affirmative, required him to go into the witness-box. He then told plaintiff, Mr. Alabone, that he need not answer the questions unless he liked. There was, he said, a large number of what were called press notices, purporting to be reprinted from the *St. Stephen's Review*, the *Christian World*, the *Guardian*, the *Echo*, the *Observer*, the *John Bull*, the *Advertiser*, the *Whitehall*, and the *Court Journal*.

Refer to page 249 of the *Guardian*. Is that your own composition?—Not that I am aware.

What do you mean by that answer? Did you write it or not?—I did not. (Witness was understood to say that he might have read and corrected a proof.)

Were any of these opinions paid for as advertisements?—No, but advertisements were to be given on condition that a notice appeared. I read the proofs.

Do you mean to say that the *Guardian* made that kind of a bargain?—I cannot say. The *Echo* certainly did.

Do you mean to say that the arrangement was made by the *Guardian*, *Observer*, *Echo*, *&c.*, that they agreed to insert praises of your book if you would give them an advertisement?—I don't know about praises, but they gave notices of the book.

No payment was made to the *St. Stephen's Review*?—The only payment was a certain number of copies.

His Lordship questioned the witness as to whether payment had been made to any of the above papers, mentioning them *seriatim*, and the witness replied that no payment had been made. In like manner the plaintiff denied that any payment had been made for testimonials.

Questioned about lacnanthe, he said it came from New Zealand. He mentioned the names and addresses of the firms from whom he bought it, and wrote down a name and address of a person from whom he procured the root itself. In like manner he wrote down by the judge's direction the materials that entered into the composition of the lacnanthe recipe.

At the conclusion of his evidence his Lordship said: This is an action brought by plaintiff to restrain Mr. Morton from pirating certain medical testimonials, and from dishonestly making use of professional information obtained by the defendant whilst acting as confidential clerk of the plaintiff, and from representing that certain so-called opinions of the press relating to the plaintiff relate to the defendant. The plaintiff is a person who was once qualified to practice as a surgeon, but who has been struck off the register. He nevertheless continues to practice as a surgeon. He also prescribes, prepares, and sells drugs for non-surgical purposes, thereby subjecting himself to penalties under the Apothecaries' Act. The defendant is a person who never had any qualification, but who having learned the business from the plaintiff, is now following it as a rival on his own account, with the addition that he represents some of the plaintiff's pretences to be his own property. He admitted engaging with the plaintiff in what he acknowledged to be a criminal conspiracy to defeat the provisions of the Medical Acts, and he admitted —whatever his admission may be worth— having been a party to wholesale illegal supply of strychnine and other poisonous drugs. The plaintiff's book is designed to puff an alleged specific for consumption which it is not uncharitable to suppose inert, if not injurious. It is recommended by so-called opinions of the press, and by statements of cases of alleged cure, and by alleged testimonials from patients. The alleged opinions of the press have every appearance of being not independent opinions or real notices, but paid or arranged notices or advertisements. The alleged cases do not appear to correspond with the case books from which they are said to have been taken. The alleged testimonials are, no doubt, in some cases written by patients in good faith, but many of them have a highly suspicious character and are suggestive of concoction or purchase. In this connection his Lordship observed that there were circumstances which indicated that the suspicions roused by a perusal of the plaintiff's book were well-founded. The learned Judge proceeded: When taken with the other admitted facts in relation to the plaintiff's business they oblige me to think that the business may probably be a cruel and nefarious system of obtaining money by false pretences from persons who are induced to believe themselves consumptive. If this is so the law will not lend its aid to protect a book published as part of such a scheme. No doubt the case is not at present carried beyond grave suspicion, but where ground for such suspicion exists I think the Court ought not to act blindfold. It was not for the interests of either party to assist Justice in reference to these considerations, and I am unable to reply upon or accept the evidence of either party except to a very limited extent. There will, therefore, be further inquiry by the official solicitor and Public Prosecutor to inquire of the newspapers whether these notices were paid for or in any way arranged Either party may, if so advised, put the case in the paper for judgment on July 3rd. In the meantime the books and papers will remain in my custody.—*Pop. Med. Month.*

ARMY AND NAVY.

U. S. MARINE HOSPITAL SERVICE FOR THE SIX WEEKS ENDED SEPTEMBER 16, 1893.

Murray, R. D., Surgeon; to proceed to Pensacola, Florida, for temporary duty, August 10, 1893; to rejoin station, August 18, 1893; to proceed to Brunswick, Georgia, for temporary duty, September 14, 1893.

Bailhache, P. H., Surgeon; to assume charge of inspection of immigrants, August 14, 1893; detailed as chairman board for physical examination of keepers of Life Saving Stations, August 18, 1893; relieved from duty as Inspector of Immigrants, August 22, 1893; detailed as chairman board for physical examination of officers, Revenue Marine Service, September 12, 1893.

Purviance, George, Surgeon; to report at bureau for temporary duty, August 6 and 10, 1893; detailed as chairman board for physical examination of Surgeon John Vansant, August 28, 1893.

Vansant, John, Surgeon; ordered before board for physical examination, August 31, 1893.

Hutton, W. H. H., Surgeon; to report at Brunswick, August 10, 1893; to proceed to Cape Charles Quarantine as Inspector, August 12, 1893; to proceed to Brunswick, Georgia, for temporary duty, August 12, 1893; to rejoin station, Detroit, Michigan, September 10, 1893.

Hamilton, John B., Surgeon; granted leave of absence for four days, August 16, 1893; granted leave of absence for ten days, August 29, 1893.

Sawtelle, H. W., Surgeon; detailed as member board for physical examination Life Saving Station, August 18, 1893; detailed as member board for physical examination of Passed Assistant Surgeon, H. T. Goodwin, August 22, 1893; detailed as member board for physical examination officers Revenue Marine Service, September 12, 1893.

By direction of the Secretary of War, leave of absence for four months, on Surgeon's certificate of disability, is granted Lieutenant Colonel Francis L. Town, Deputy Surgeon General U. S. Army.

Austen, H. W., Surgeon, Detailed as recorder Board for physicial examination of Surgeon John Vansant August 28, 1893. To represent the Service at Meeting Pan-American Medical Congress, September 5, 1893.

Gassaway, J. M., Surgeon. To inspect local quarantine at Pascagonla, Miss., August 23, 1893.

Mead, F. W., Surgeon. To proceed to Chicago, Ill. for temporary duty August 9, 1893.

Carter, H. R., Surgeon. To proceed to Fernandina, Fla. to inspect quarantine, and return to Bureau, August 7,1893. To proceed to Pensacola, Fla., August 10, 1893. To proceed to Brunswick, Ga. for temporary duty, Augsut 12, 1893. To report at Bureau Aug. 31, 1893. To represent the service at Pan-American Medical Congress, September 5, 1893. To proceed to Philadelphia, Penna., and Reedy Island quarantine September 9, 1893. To proceed to Cape Charles quarantine and assume Command, September 11, 1893. To report at Bureau for temporary duty, September 13, 1893.

Wheeler, W. A., Surgeon. Detailed for duty at Camp Lou., August 14, 1893. To rejoin station August 22, 1893. Detailed as Recorder Board for physician examination P. A. Surgeon, H. T. Goodwin, August 22, 1893.

Carmichael, D. A., Pass-Asst. Surgeon Granted leave of absence for thirty days, August 16, 1893.

Peckham, C. T., Passed Asst. Surgeon, Granted leave of absence for twenty days, August 10, 1893.

Glennan, A. H., Passed Asst. Surgeon. To proceed to Reedy Island quarantine for temporary duty, August 30, 1893.

Magruder, G. M., Passed Asst. Surgeon. To proceed to Pensocola, Florida, as Inspector, August 10, 1893. To proceed to Brunswick, Ga., for temporary duty August 23, 1893. To proceed to Beaufort, S. C., as Inspector, September 9, 1893.

Kinyoun, J. J., Passed Asst. Surgeon, Detailed as Inspector New York quarantine, August 12, 1893. Detailed as member board for physical examination of P. A. Surg, H. T. Goodwin, August 26, 1893.

Goodwin, H. T., Passed Asst. Surgeon, Granted leave of absence for thirty days, August 10, 1893. To proceed toLouisville, Ky., for duty August 15, 1893. Ordered to appear for examination as to physical condition, August 22, 1893.

Varighan, G. T., Passed Asst. Surgeon. To represent service at meeting of Pan American Medical Congress, September 5, 1893.

Geddings, H. D., Passed Asst. Surgeon. To report at Bureau for temporary duty, September 13, 1893. To proceed to Brunswick, Ga. for temporary as Inspector, September 15, 1893.

Cofer, L. E., Asst. Surgeon. To proceed to Savanah, Ga. for duty, August 25, 1893.

Decker, C. E., Asst. Surgeon. To proceed to San Francisco quarantine for temporary duty, September 3, 1893.

Nydegger, J. A., Asst. Surgeon. To proceed to Jersey City, N. J. for temporary duty, September 2, 1893. To rejoin station, Sept. 9, 1893.

Oakley, J. H., Asst. Surgeon. To Proceed to Quebec, Canada, for duty August 26, 1893.

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ORIGINAL ARTICLES.

BLOOD-LETTING AS A THERAPEUTIC AGENT IN THE TREATMENT OF DISEASES.*

J. S. DUKATE, M. D.

"*Stat magni nominis umbra.*" "It stands the shadow of a mighty name." There is a great diversity of opinion, and a tendency to reaction in regard to the utility of blood-letting. Some holding it to be unique, single in kind or excellence. To the old physician it is a souvenir of the past.

For nearly half a century I have been a close observer of its effects clinically, and I have always considered it, when judiciously employed, a *semper fidelis*—always faithful in its results, and it should be in the hands of every physician a *semper paratus*—always ready. But for years it has only been known as "the lost art." Why? Because times have changed and we must change with them.

But the great question that confronts us is, must we ignore all the learning and clinical experience of the past; must we say physicians of fifty years ago were all in error; that their knowledge of physiology, pathology and therapeutics was a heterogenious mass of crude notions and absurdity. Were all the eminent surgeons and physicians of the past deficient clinicians. They were eminent clinicians, and laid the foundations of medical science deep and permanent. They all advocated and used the lancet, and yet we of to-day say—"*dulce et decorum est pro patria mori*"—and it is sweet and glorious that we old practitioners die to the past surrounded by such eminent lights as Hunter, the Coopers, the Bells, Abernethy, Brodie, Travers, Lawrence, Thompson, Eberle, Rush, Parrish, Dewees, and many more too tedious to mention, whose fight with disease and death was as successful as that of modern practice in all the varied departments of morbid action. It has been said that all these men and many more, turned their wards and private rooms into slaughter houses with the lancet, and killed more than they cured. Surgery is to-day just where John and Charles Bell left it fifty years ago, with only the Listerian mode of dressing wounds, and as applied in operations, which is a valuable addition to surgical therapeutics. The ligation of arteries, amputations and trephining are performed now just as they were fifty years ago, so far as the mechanical surgery is concerned, although I am free to admit that abdominal surgery has advanced quite rapidly and successfully.

A few years ago I heard it stated in a medical society, by a reputable physician now dead, that no physician of any note or standing in the profession would have the hardihood to stand up and advocate blood-letting either in the strictly inflammatory or nervous types of disease. Shortly afterward, this same physician was called in consultation in a case of parturient-convulsions and bled the patient freely and saved her life. Meeting him afterward, I said to him, "How comes it, you resorted to venesection in this case, holding the views you do against the remedy?" He remarked, "Well, I looked upon it as the last resort." I remarked, "You should have looked upon it as the first remedy, the *sine qua non*, and everything else as simple adjuvant.

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*Read before the Pike County Medical Society, Ind.

Before I enter clinically into the consideration of blood-letting, I wish to speak briefly of it as a means of diagnosis in some of those obscure cases, where doubt exists as between a neurosis and an inflammation. These cases are usually marked in their pathological significance and therapeutical remedium. When inflammatory blood is drawn, it coagulates more slowly than healthy blood; the clot is harder and smaller, and the quantity of serum is apparently greater. Then inflammatory blood never fails to exhibit the tough yellow fibrinous stratum known as the "buffy coat"—depressed in the center with elevated edges resembling somewhat Hunterian chancre, "cupped" as the old term expressed it. By the abstraction of a small quantity of blood where I have been perplexed and in doubt, I have had all doubt removed in forming a diagnosis as between an inflammation and a neurosis, and have been led into the right path in my therapeutics when I found the above conditions of the blood present. Of course, I discard the "buff" when dependent on strictly physiological laws, as plethora, gestation, active exercise, etc., but my argument has reference strictly to pathological conditions.

We will find the pathological conditions of the blood greater when the fibrous or the serous tissues and parenchyma of organs are the seat of either acute or subacute inflammation; and least, if not entirely wanting, in mucous and tegmentary tissue. To the eye alone, we may find all the local signs of inflammation from a subjective point, such as alteration of color and size, modification of sensation, increase of temperature with modification of the function of the part; I say, it is possible for all these conditions to exist and that without inflammation. I would therefore urge the propriety of small abstractions of blood as of great utility in assisting us in a correct diagnosis in many of these obscure cases.

Dr. Reid says in his work on nervous diseases, "that less slaughter, I am convinced, has been effected by the sword than by the lancet, that minute instrument of mighty mischief." Such an expression coming from an author, shows him to be a very reckless observer and defective clinician.

Let us look facts square in the face, and what is true of one thing may *per se*, be true of another. To-day the anatomy of the human body is just the same as it was fifty years ago. The physiology of the various functions the same. Morbid anatomy the same, and the entire phenomena of inflammation, from hyperemia to gangrene, the same. In therapeutics, fifty years ago, tartar-emetic was a nauseant and emetic; it is so to-day. Calomel was the specific for syphilis, and has kept its reputation untarnished to this hour. Fifty years ago blood-letting was the great antiphlogistic remedium and combater of many of the neuroses. Practitioners of that day were not engaged in cultivating speculative medicine; they were veritable clinicians, close observers of symptoms and treatment. They did not believe in or draw their conclusions from experiments made upon dumb animals, but obtained their knowledge at the bed side of the sick. The speculative and metaphysical medicine of the Germans had not made its appearance; the expectant practice of Todd and Bennett was not born. It is true, that like every other valuable remedy, blood-letting in some hands became a hobby and to a large extent fell into the rut of routine and empiricism, which generated some injudicious use of the remedy. In the hands of such men, any remedy however valuable is liable to abuse and in danger of being carried to extremes. Extremes in medicine, especially in the practical relation to society, are dangerous, while conservatism is usually safe. I am convinced that the great neglect of blood-letting in modern practice is about as pernicious, if not more so, than the lamentable abuse of it in the hands of its friends. Hear what Dr. Tilt, of London, says: "Practitioners of the present day are so hoodwinked by the bug-bear debility, that they fear to ruin a patient's constitution by taking away ten ounces of blood from a patient of average strength at the outset of acute inflammation."

I hold, any average doctor can cure a slight ailment, nature will do the work if let alone exclusively on the expectant plan, but the highest test of skill is requisite when he comes to confront and grapple with a grave form of disease; those grave forms of *sthenic* inflammation and the profound neuroses that are overwhelming the great nervous centers. No expectant line of treatment is safe here; the edifice is tottering and reeling, and is shaken from center to circumference, and a *shilly-shally*, milk and lemonade practice savoring of homœopathy, will fail in this fearful turmoil. As a clinician you look upon the scene and ask yourself what is to be done. Science answers, subdue the quickened and laborious action of the heart—this excessive vascular or arterial tonus and capillary stasis, and derangement of innervation and nerve centers—down it with the club of Hercules, the lancet. I believe I can say without any bias or prejudice that I have given all the so-called vaso-motor and cardiac depresents in all forms of *sthenic* inflammation, and what I may have accomplished with them I am confident could have been accomplished by blood-letting and with a more speedy return to convalescence.

The modus-operandi of blood-letting is that it procures an effect upon the blood directly and immediately, and upon the system circulating the blood. The obvious effects upon the blood are first, a diminution of the actual quantity circulating in the system. But it don't diminish it in the same proportion in every organ; for the brain is a notable exception. Now the effect this diminution is very transient, the normal quantity is soon restored. But the more important change the pathologist wants is in the quality of the blood, for immediately after venesection the vessels take up watery fluid from all parts of the system (hence valuable in some *sthenic* cases of anasarca) and thus the proportion of water in the blood is increased, and the blood is less stimulating to the heart and arteries. Now in all the process, the quantity of albumin and fibrin is scarcely affected, while on the other hand the corpuscles are diminished in a very notable degree.

The second effect of blood-letting is to diminish the activity of the circulation. Under blood-letting the heart contracts with less power upon its contents, and propels a less quantity of blood into the arteries and capillary system. Here is the important difference between the *modus-operandi* of so-called motor depressents and venesection. Tartar-emetic for instance, slows the action of the heart, by first acting upon its inhibitory nerve, the pneumogastric, whereas, blood-letting slows the heart by first lowering vascular tonus, and acting upon the blood conjointly in relation to its quantity and quality. This gives it the preference over tartar-emetic or any other cardiac depressent.

Summed up, blood-letting physiologically slows the heart, decreases the momentum of blood in the vessels, removes capillary stasis and alters in some respects the constituents of the blood. I know it is claimed by those opposed to blood-letting that all the above can be accomplished by the motor-depressents and cardiac sedatives. Now, if all this can be accomplished by these agents, we must admit that a prolonged circulation and chemical change must take place before these effects are manifested, either for general purposes in the system or for local selection. The so-called antiphlogistic remedies are slow in their action, and frequently behave unseemly, and at the most are uncertain, whereas blood-letting is prompt and certain in its effects and results.

An indiscriminate use of blood-letting is not contended for. Blood-letting to be efficient requires great discrimination in regard to the type of the disease, time, age, idiosyncrasy, sex, quantity and repetition. Ordinarily it is never done too early, but more frequently too late, and this very fact often brings it into ill repute. Our fathers gave us, as they supposed, very important rules for our guidance in the premises; among the more important was that relating to the pulse.

After I had been in practice about fifteen years, acting upon the suggestion of Lænniae, I discarded the pulse as a guide for venesection, and took the fountain head of the circulation for my guide. I am satisfied from long and careful observation that the heart is the best and safe guide for our conduct and for repetition of the measure. As an example, in abdominal inflammation, either traumatic or paturient, if we rely exclusively on the pulse, we should be very liable to withhold venesection. This deceptive pulse is one of the most difficult to discriminate and point out the course to pursue. An error here may be fatal to our patient. So I reject the pulse in forming my opinion upon the propriety of blood-letting from its unreliable indications. The stethescope offers a much more reliable and safer indication than the pulse or pain. When the contractions of the ventricles are energetic we may bleed without doubt or fear, if the pulse is low and weak they will rise; but if the contractions of the heart are feeble, although the pulse still retains a certain degree of strength, we must be cautious in its employment. When conjointly, the pulse is very strong and bounding and the contractions of the heart moderately strong, we may bleed with advantage as long as there is not a marked diminution in the noise and impulse of the heart's action. But on the other hand, whenever conjointly the pulse and heart are feeble, we must not open a vein, whatever be the name or seat of the disease. I therefore look upon the stethescope as the best indicator, especially if those difficult cases in the domain of practical medicine, where so much is to be gained by a judicious discrimination, as in the thoracic, abdominal and intracranial inflammations. It may be surprising that the practice of feeling and relying upon the pulse has been so generally followed in all ages. The reasons of the practice are, however, sufficiently obvious. It is very easy of performance, and gives little inconvenience either to the patient or physician. The most scientific can derive from it but few indications and conjectures for blood-letting, but the most ignorant charlatan can without exposing himself deduce from it all sorts of indications.

We have no use for the pulse ordinarily now to determine the normal temperature of the body, nor do we hear any more the old term *choler-mordex*. The pulse I opine is of more value in prognosis than it is in diagnosis or in therapeutics. I have thought that the uncertainty of the pulse gives it a preference with persons of inferior qualifications, over means quite certain in their nature, and which enable the non-professional observer to judge of the skill of the physician by the correctness of his diagnosis and prognosis. Then the mere state of the pulse is not the criterion for indicating the precise state of the circulation in general; it does not certainly indicate its condition in the entire heart, as it only corresponds with the contraction of the left ventricle, which may be regular at the time of taking the pulse, when that of the auricles and right ventricle is irregular; then in like manner the pulse fails as a good guide as to the expediency of venesection. The certainty and facility with which the stethescope indicates the propriety of blood-letting appears to me to be one of the great advantages to be derived from the instrument, and if the points set forth are carefully studied and adhered to, the physician will not be very liable to be mislead in the use of the lancet, but will have a correct basis for his opinions and practice.

I have always acted, in treating human maladies, on the principle that it is best to generalize disease, and to individualize the patient, as every one has a constitution of his own. It has been said with much truth that every man has his own urethra and every woman her own uterus.

I wish to quote a late writer on the subject of blood-letting. "Essentials of Medicine," by Professor Hartshorn, he says: "It must be admitted that blood-letting has more opponents and fewer defenders than at any previous period in medical history. Why is this? By reason of 1, Reaction from previously existing abuse of the remedy, but the abuse of a remedy don't destroy its value. 2, A change in average human constitution as contended for by some, occurring under the artificial habits of civilized life. [This Flint rejects.] 3, False construction and misapplication of recent science. 4; Leadership and fashion.

The reaction has proceeded too far, going from one extreme to another. We should not throw aside as useless all the experience of our predecessors, as if every new fact was necessarily the heir of some dead old one. I hold that false construction and misapplication of observed facts in physiology and pathology have been operative. In physiology by the denial or depreciation of the *active* part taken by the arteries in the circulation, and in pathology by the veiws of Professor J.H. Bennett in regard to inflammation, that of *exudation* alone. Now, when the *exudation* has occurred, can any but palliative or expectant measures be applied to the management of its changes. But the active concentric determination of blood—the arterial excitement—cannot *this* be essentially MODIFIED by treatment? Yes. By abstraction of blood, we lessen (for a time at least) 1, The *fullness* of the *vessels.* 2, The number of *red corpuscles.* 3, The force of the *hearts impulse.* 4, The force of the *arterial impulse.* 5, The excitement of the *nerve centers.* By each and all of these influences, we diminish the vascular excitement connected with an inflammation and thus I repeat *lessen the amount* of resultant *exudation*, and render, as Paget remarks, its "biography" more normal, its changes less degenerative and destructive.

It is therefore altogether an erroneous assumption of Professor Bennett, and others, that inflammation is a "self-limited process which cannot be cut short nor interfered with to advantage." If there be anything positive in medical experience, I believe the contrary of this to have been established.

How, then, do we *define*, or *classify* the *remedial* action of blood-letting. It is *balancive.* What do we mean by *reducing* treatment? The answer to this question is important. *I do not know of a single case of any kind of disease, in which the indication or object of medical treatment is to reduce the strength or lower the vital powers of the patient's system.* What we aim to *reduce* is *disproportionate vascular excitement or congestion:* to restore the BALANCE of the circulation. It is mere *imagination* that the abstraction of a small quantity of blood *must always* lower the patient's strength. Under some circumstances it actually increases it.

Taking these propositions as established, we may draw blood for, high *sthenic* inflammation. 2, Active congestion, threatening inflammation or hemorrhage. 3, General plethora. 4, *Sthenic* spasm in certain conditions of pregnancy and convulsions. In all cases the practitioner should for himself be the judge of the *effect* upon the pulse. It is remarkable how small an amount will sometimes do a great deal of good."

I have presented the views of one eminent in the profession as a teacher, clinician and a safe and successful practicioner, one who having no pet theory to advance, looks facts square in the face and who draws his conclusions from sound physiological principles, pathology, and clinical observation and facts. He very justly discards the fanciful theory of Virchow,—that stimulation, *irritation* and inflammation are *essentially* and practically, as well as causative, only degrees of the same vital impression.

Then, taking the heart in preference to the pulse as the proper guide, holding that there is physiologically a distinction in the arterial circulation, to some extent separate and apart from the cardiac movement, by *reflex vaso-motor* inervation, or perhaps due largely to their own inherent contractibility (for without this I deem the cardiac movement insufficient to send the blood to the remote and fine capillary system), with this physiological view as a basis, we are prepared to use venesection scientifically and with the very best results in congestions, acute inflammations, spasmodic affections, various conditions of gestation and parturition, and in some abnormal conditions of the catamenial function.

In conclusion, strictly adhering to the foregoing principles, I am prepared from a clinical standpoint to advocate blood letting in the following pathological conditions coming under special pathology. And first, in those cases justly denoted *sthenic* inflammations occuring in constitutions not debilitated previously by bad habits or other causes—in this category are included pneumonia, pleuritis, bronchitis acutus—and pericardial inflammations; acute phlogosis of the brain or meninges either idiopathic or traumatic; the abdominal inflammations traumatic or otherwise—and more especially that formidable variety following parturition, viz: metro-puerperal-peritonitis. And right here I am regarded with a holy horror by the disciples of Todd and Bennett, and confronted with the exclamation, "*dare you use the lancet* here." Yes I dare and will. I have nothing to do with Todd and Bennett, I am governed by my own judgement and clinical observation. "Well, don't you know," says the bacteriologist that *bacilli* alone are responsible for the disease, and it is a veritable septicemia, and a line of antiseptic treatment is the only safe course. Very well, if bacteria are capable of setting up a grave and tremendous inflammation, it is nothing but inflammation I must first combat, then when I have subdued this Mr. Antiseptic, you can come in and finish up, and remove the products. The bug-bear debility, and weak and rapid pulse would not deter me from the use of the lancet, for I have always found a decided improvement in all the vital conditions after a free and early blood letting. To be of any value it must be early.

A few remarks in regards to the utility of blood letting in the true neuroses In that terrible affection, angina-pectoris. I have the best of results in immediately relieving the heart pang. I have also relieved the spasm with nitrite of amyl, but no quicker or more effectually than I did with venesection. In fact blood letting in those nervous affections marked with cerebral and muscular lesions, is an invaluable mechanical antispasmodic. In a large number of morbid conditions coming on during pregnancy, the judicious use of the lancet is valuable. Also in those nervous and circulatory disturbances following an acute suppression of the catamenia, characterized by severe cephalagia, fullness of the blood vessels, pelvic pain with *dyskinesia*, blood-letting puts a quietus to the whole chain of morbid phenomena, and thereby restores normal menstruation. I might lengthen the list, but let these suffice. A few years ago I concluded to experiment with Mackintosh's practice of bleeding in the cold stage of intermittent fever, though I do not advocate the practice. I tied up the arm while the man was shaking like Beltshazer, opened a vein and took about 16 ounces of blood. While the blood was flowing the rigor began to diminish, and was entirely gone by the time his arm was tied up,and a few small doses of medicine completed the case. In my long experience with the diseases of the Mississippi valley, I can say that I never have bled a patient and afterward regretted I had done so, but on the contrary I have had to regret frequent failures to do so; perhaps being influenced too much by the prejudice of the times, and unfortunately falling into the rut of fashionable medicine.

We have a class of nervous affections which are unquestionably produced by a toxic element in the blood, the proper emunctories have failed to eliminate it from the blood either from temporary functional derangement, or from organic disease. These toxic elements act with great force and danger on the nervous centers; on the brain in producing profound coma, and upon the medulla spinalis producing reflex motor excitement manifested in clonic convulsions. We have such pathological examples notably in *uremic toxemia*, acute sthenic epilepsy, scarlatina, and rubiolia; and I have witnesssed some acute attacks of hysteria following uterine disturbance from sudden suppression of the catemenia. I am convinced that in menstruation there is a toxic element that should pass away with the flow, for I believe, like the kidneys, liver, intestinal canal and skin the menstrual molimen is also an emunctory for the time being, and is of great value in the female economy in this particular.

Now, in all cases of the above type, I know that phlebotomy is a remedy of great value and depüriates the blood, thereby relieving the nervous centers, and the entire nervous system of its hypermorbid excitement by directly draining away the *materies morbi.* By also increasing for a time the amount of serum in the blood, the proper channels are aroused to increased secretion and soon rids the blood of the virulent enemy of the nervous system.

A few cases in illustration (of typical cases) will complete this paper and establish beyond question the propriety of blood-letting in this class.

A. P., aged 46, had served in the army three years, had no sickness while in the service. Weight about 150 lbs; nervo-bilious temperament. All the history I could get of his case was that for about five days before the attack he complained of constant pain in lumbar region, but continued to work on the farm. October 16, 1866, I was sent for to see him; arrived at his residence at 11 P.M. I found him in a state of profound coma with terrible convulsions; his skin had a urinous smell. I diagnosed the case acute *sthenic uremic toxemia.* I secured the services of two stout men to hold him while I tied his arm, and by the light of a lamp I opened the median basilic vein and drew away about 18 ounces of blood. As soon as the blood began to flow the convulsive movements began to subside. After his arm was tied up, they entirely ceased. Consciousness returned; he took a purgative and diuretics and had a speedy recovery. What would an hypodermic injection have done for this case?

Mr. E. E., moderate drinker; been anasarcous for about one month; called in consultation with Dr. McMillen, of Washington; patient had convulsions; in a semi-comotose condition; urinous odor from his body; has passed no urine for forty-eight hours, none in the bladder. Purgatives and diuretics have been used with sinapisms to lumbar region. I recommended venesection. Concurred in; drew away about fifteen ounces of blood. Convulsive movements immediately subsided with the comotose condition, and in five hours after bleeding he had a copious discharge of urine and made a good recovery. The above were typical cases of uremic intoxication, and unquestionably were restored by blood-letting. One more case and I am done. Miss Ellen L., aged 18; of fine physique; rather inclined to an irritable temper; mensturation normal. Washed off the porch in cold weather at six P. M. in her naked feet and while mensturating. Complete suppression of the flow; spent a restless night. In the morning I was sent for. Found my patient complaining with a severe headache, the pain confined along the sagittal suture, a veritable *clavis-hystericus*. Severe pelvic pains; eyes unsteady, rolling rapidly in their orbits; quivering of the lips, and twitching of the facial muscles ; well marked globus-hystericus, hyperasthesia of the skin described as a pricking sensation. In fact my patient was on the very edge of hysterical convulsions ; acute *sthenic hysteria*. I called for a bandage and began to bleed her. I shall never forget the horror-stricken features of her mother when she discovered my purpose as she remarked "You ain't agoing to bleed her are you? doctors have quit bleeding." I replied, Yes madam, I am; you see I am one that bleeds when I think there is a necessity for it, and there are a few more left of the same sort. Now look and see how soon I will quiet down all this disturbance by taking away a few ounces of blood. I bled her to the amount of 12 ounces. She immediately became calm; headache and pelvic pains disappeared and she went off into a quiet refreshing sleep. In the afternoon ordered sedleitz powder, and a hot foot bath at night. Next morning on visiting her, found she had rested well; purgative had operated, and she was having a fine flow of the menses. Dismissed.

Her mother had a pleasant, serene smile as she remarked: Well Doctor I now believe if the doctors would bleed more they would not lose so many patients. To which I acquiesed.

Let me have your indulgence while I quote a case from Dr. Fordyce Barker, in his admirable work, *Blood-letting in Obstetric Medicine*, 1871; treating of certain exceptional cases of puerperal mania, he says: In February, 1868, I was sent for to visit a young lady the thirteenth day after her confinement. Her puerperal convalescence had been so free from all unpleasant symptoms that I had ceased to visit her. I found her gloomy and taciturn—a very marked change from her usual temperament—complaining of nothing, and refusing to answer any questions. The nurse informed me that the first symptom, which had occurred a few hours before, was a complaint of pain in one of her breasts, and a refusal to nurse her child, which she had been very fond of doing; one breast was somewhat tumefied and evidently painful; her pulse was somewhat tense and quickened. The axillary temperature was 103°. There had been no chill; on visiting her the next morning I found that she had not slept a moment; that she had not nursed her child; or permitted anything to be done to her breasts; or taken one drop of drink, one mouthful of food or a particle of medicine. She was now beginning to talk wildly and rapidly without noticing any remark that was made to her. During the day I visited her very frequently, and at each visit I found her condition becoming worse. In the night following I found her face highly flushed, her eyes red, and she had become very violent, with an astonishing display of muscular power. She would tear off her clothes, and scream incessantly, with a constant repetition of certain phrases, in such tones, and with a 'damnable iteration' as almost to drive every one crazy who heard her. With great difficulty her husband, her brother, and the nurse held her while I opened a vein in her arm. As the blood flowed at first it scattered generally around the room and on the persons of those of us about her. She gradually became more quiet, and sank down on the bed, and fell into a sound sleep while I was bandaging the arm. Nearly five hours after she awoke, asked for her baby to put to the breast, and she was perfectly cured. After this she did not have a single symptom of disease, and her convalescence was rapid. We estimated the quantity of blood taken at about fifty ounces, although so much was lost at first that we could not judge very accurately. In no case have I ever seen the effects of medical treatment so promptly and so happily curative."

My experience with parturient mania has been limited, having only encountered three cases in my whole obstetrical experience Two were in multiparæ, and one in a primipara. One multipara was almost sanguine from excessive post-partum hemorrhage. Calmatives, with perfect seclusion restored her to health. The other two were well marked cases of a sthenic type In these I early resorted to phlebotomy with the best of results, making the treatment following, consist principally of a combination of hydrate of chloral and bro-potassium with strict avoidence of all mental excitement and with good nutriment.

THE LIMITATIONS OF THERAPEUTICS IN THE CONTROL OF DISEASE.*

HENRY M. LYMAN, M. D.,† CHICAGO.

It is not a great while since I had occasion to prepare and deliver an address, in which I had the pleasure of calling attention to some of the great and valuable advances that have been made in therpeutics as applied to the treatment of medical cases during the past few years. And under the influence of those brilliant discoveries, I found myself indulging in many optimistic anticipations, which, perhaps, were then too sanguinely expressed.

Subsequent reading and research have led me to feel that while there is much for which we can be grateful, and with which we cannot but be delighted, there is still another side of the picture, to which it is not usual to make reference. It is much more popular and agreeable on occasions like this to come before an audience of brother physicians with some new discovery that shall hold out great anticipations of substantial progress in the therapeutical art, by which we may be able to relieve humanity of diseases and of suffering that previously were beyond the reach of medicine. That is what we delight to do, and what is a pleasure to do, and what we all seek to do on occasions like this, and therefore, the other side of the picture is apt to be neglected, but I hold the other side of the picture is as important for the practical physician for practical therapeutics, as is that which presents the more brilliant prospect.

I have chosen for my subject to-day some of those limitations with which so many of us are familiar, and which we must all encounter in our endeavors to deal therapeutically with diseases. I will begin by retracing some of those familiar difficulties with which all practitioners soon become too well acquainted, and will then advance some of the wider applications of my theme. Let us remember, in the first place, what our experience has been, both personally and collectively, with such a familiar drug as mercury, and its preparations and its compounds. You know how invaluable are these compounds. They are indispensable to the practical physician; it is impossible to get along without them. Yet remember what sometimes happens, unfortunate cases of salivation, destruction of the red blood corpuscles, great debility consequent upon the use of the article, the patient sometimes landing in a condition of great misery and suffering in consequence of the use of this most valuable drug. Let us think of that for a moment. It is important for us while we study the useful properties of a drug, to also accurately acquaint ourselves with its deleterious properties, that we may guard against those injurious results that follow the use of such drugs. Again, take arsenic, an old remedy which we have used time and time again, and we cannot dispense with it. It is absolutely indispensable in the armory of the physician, yet remember what effect sometimes follows the use of that remedy. And how a patient who takes iodide of potassium may suffer with coryza, excruciating pains of a neuralgic character involving the territory of the fifth pair of nerves; disordered digestion; impoverishment of the blood; and we could go on with a long train of the ill consequences that follow the use of this most valuable drug. The lesson I would draw from these facts is the importance of becoming acquainted with the deleterious as well as the beneficial effects of an article, so that we may guard ourselves against those accidents that will follow the incautious or untrammeled use of remedies; for if we but acquaint ourselves with both sides of the picture, and know what harm can be effected, as well as what good will be accomplished by the administration of such a drug, we shall not be likely to have an experience of those unfortunate results of the use of the article.

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* An Address delivered before the Michigan State Medical Society, 1893.

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Then, again, take another and familiar remedy with which you are acquainted—salicylic acid and its compounds. Those of you, who have practiced medicine for half a century or more, are familiar with the straits in which the physician was placed when brought in contact with a case of acute rheumatism, every joint, perhaps, in a state of inflammation, pain, swelling, everything that is characteristic of acute inflammation; the patient not capable of being moved, absolutely paralyzed, the approach of his physician or attendant giving rise to paroxysms of agony. You know that was a familiar scene in former times before the introduction of salicylic acid, and what a transformation was wrought in the therapeutics of rheumatism when the effects of those drugs were recognized and made known. And you all remember how, as time went on, we again find out that those drugs, so useful to arrest pain and cause a cessation of inflammatory symptoms, so potent to restore the patient to a condition in which he could use his locomotor apparatus and sleep without resorting to opiates in large doses, you will remember that those also began to manifest in your experience various symptoms, not only gastric irritation, loss of appetite, indigestion and all such consequences of the administration of the drug, but also, alarming symptoms of heart failure, as a consequence of the incautious administration of those potent remedies, rendering it necessary, you see, to study most carefully, the evil that might flow from an incautious or excessive administration of those most valuable remedies.

Another invaluable class of remedies—the bromides. You are familiar with their use in every day practice; how indispensable they have become to the practical physician who deals with nervous disorders, notably with epilepsy; how under the influence of the bromides it is possible to arrest sudden cases of epileptic paroxysms, to postpone the attacks, and to render them less frequent, less formidable, sometimes to effect absolute cure. And yet, remember how with all of us, in our earlier experience, perhaps, more than in our later experience, it was not a common thing to witness a temporary degradation of the intellectual faculties, under their influence. All of which shows how important it is to have fully before the mind, continually and always, the possibilities of evil that may flow from the incautious or excessive use of the most powerful, and consequently the most useful drugs that are known. The same thing may be said also of some of the other therapeutical measures to which we have recourse in the treatment of disease. You know that it is not an uncommon thing to call in the aid of a surgeon for the treatment of certain maladies, notably of epilepsy, and how surgical measures have been employed, and how, in spite of all these methods you have seen relapses occurring. In certain cases of epilepsy treated with drugs, though the paroxysms of the disease may have been suppressed, and the patient apparently cured, or if not absolutely cured, greatly relieved for a long period of time, the patient will sometimes tell you that after all he would prefer not to continue treatment any longer. Not because dissatisfied with your methods of measures, but because he feels so much better when the disease was allowed to run its natural course, and because an explosion or convulsion at certain stated intervals, seems to give absolute relief, showing that the wisest and best therapeutical methods may nevertheless absolutely fail in giving to the patient that degree of comfort and satisfaction which we desire, and which we consider the mark of successful treatment.

Going a little further, and considering not merely the use of individual drugs, let us consider somewhat the result of what may be called therapeutics on a large scale as applied to communities, and there we shall be struck very forcibly with the evidences of the importance of having reference to the shady side of our methods as well as to the bright and promising features of the measures that we recommended and employ. Take, for example, such a disease as tuberculosis. Now, tuberculosis is recognized as an infectious disease. We know the cause of it, and we know that that cause is an exotic parasite that becomes lodged in the body of the patient, and that the manifestations of the disease are the consequences of the growth and multiplication of that parasite in the body. And we know that this parasite may find its way from the body of one individual to that of another who is healthy, and who may thus be transformed into a diseased patient. Suppositions of this kind have been prevalent for ages in the history of the world. We have, in our own way simply demonstrated what was formerly a suspicion, and what was in the minds of many more than a suspicion.

It is in the treatment of such diseases as this that we may learn something with regard to the importance of having reference to the possibility of doing harm as well as good by the methods that we emyloy. Take, for axample, the experience of the Italians during the last century. One hundred years or more ago, tubercular consumption was regarded as a communicable disease. It was dreaded almost like the plague, like leprosy and small-pox, and when a person was infected with tuberculosis, he was driven from society, became an outcast. In the city of Naples, the most stringent laws were enacted for the preservation of the community from the ravages of tuberculosis. If a physician detected a case of pulmonary tuberculosis among his clients, he was obliged at once to communicate the fact to the sanitary officials of the city under pain of banishment from the city for ten years. The unfortunate patient was made an outcast. He was excluded from all possibility of association with his fellowmen. His family consequently were driven out from the society of their fellows and were reduced to destitution and misery. Employment became impossible for such a patient, and when the poor fellow died, the house in which he had deceased was literally eviscerated; the plastering was removed from the walls, the wood-work torn out, and everything built over. And yet what was the result? Tubercular consumption in that city was a more fatal disease than it was elsewhere, and you can see, after a little reflection, why that should have been the case. For when an unfortunate was thus treated and thus deprived of employment, the horrors of starvation overcoming him and his family in addition to the ravages of the disease, a fatal consequence would be much more inevitable than under other circumstances. So that certainly we have, in our public dealings with disease, to consider the possibilities of harm as well as of prospective good in the methods we employ.

In the same way we must keep in mind also the possibilities of harm from the measures we employ on a large scale against infective diseases that are foreign to the country. We have before us the possibility at this moment, of being compelled to fight against the introduction of cholera from the old world. On looking over the country, it is the opinion of those conversant with the matter, that it is important to draw a cordon around our borders, and to subject all incomers from without to a most rigid inspection, for the purpose of keeping out the disease. That may be the better way. But you must always also keep in mind the other side of the picture; that just in proportion to the stringency with which we carry out the quarantine method, and just in proportion to our success with which we are able in this way to bar out a disease like this; just in proportion to our success in that direction will become our reliance on that as a method of protecting ourselves against disease; and experience shows that where nations rely upon quarantine as a means of protecting themselves from disease, other methods are neglected, and filth accumulates in the crowded quarters of the country. Sanitary improvements and hygienic arrangements for the promotion of health are neglected, and everthing falls into an unsanitary condition. So that when teaching quarantine measures for the exclusion of epidemics like cholera, we must see to it that we do not fall into a fool's paradise of false security that will grow up from reliance upon stringent quarantine.

Let us also consider our own domestic arrangements for the promotion of health in the communities where we live, and let us take careful thought as to the measures which we employ, and see whether there may not be a possibility of doing harm as well as good when undertaking to legislate for the health of the community, and endeavoring by official action to improve the health of any given country, or cities and villages. Here the greatest caution is necessary, for the reason that much of our legislation in this direction is based upon the experience of epidemics—experience that has been gathered during epidemics of fever and of cholera, typhus fever and yellow fever, epidemics of brief duration, during which great efforts are put forth for the arrest of the disease. And out of the experience that has been thus gained grows up a certain amount of precautionary legislation for the promotion of public health. Now, experience that is thus gained under the stress of alarming excitement, and especially experience that is derived from brief epidemics in small communities, in rural localities where but a few families are subjected to the disease, is seldom a safeguard for the exigencies of ordinary life. We ought to be cautious lest in the application of such experience we do harm as well as good.

Take, for example, the experience of certain English cities with regard to the notification of disease. You know that England has probably the most perfect sanitary system of any country in the world. The dense population, the great wealth of those communities is such that they have been enabled to carry out on a larger scale and in a more perfect manner than in any other part of the world, what may be called a series of sanitary experiments for the promotion of public health, and it is to their experience that we may look for the most valuable information on many of these points; so, therefore, let us take what that experience shows with regard to the public notification of disease. You know it is considered one of the panaceas for the arrest of epidemic diseases that there be a health official to whom shall be given immediate information of the occurrence of infectious disease anywhere in his jurisdiction, so that he shall at once know of the presence of cholera, typhus, scarlet fever or any other infectious diseases that may be subjected to sanitary supervision. And then you know that in many communities it is customary for the officials to at once take active measures to prevent the spread of those diseases. Now, we must here be on our guard, for it is just here, when we are dealing with what may be called domestic pestilences, that we are liable to fall into error through blind reliance upon experience that has been acquired under extraordinary circumstances during the prevalence of occasional brief epidemics that quickly disappear and are soon forgotten by the community.

In England this method of notification of the presence of disease in the community has been introduced, but not as an universal measure throughout the whole country. This was a very fortunate thing, because it gave an opportunity for the comparison of methods. In those localities where the practice of notification was introduced, every effort was made to secure an efficient execution of the law ; and in this way a great amount of valuable information has been secured. In other sanitary districts, notification of disease was not introduced, and the old order continued. An opportunity was thus afforded for the comparison of results between those districts in which notification was enforced and those in which it had not been introduced. Recently a statistical comparison of this sort was made by the statistician of the general council, one of the high officials of the sanitary department of England. A remarkable surprise was afforded by this investigation—one of the numerous surprises that attend our first and imperfectly enlightened experiments in sanitary administration. It was found that, instead of the great advantage to public health that had been anticipated in the districts where notification had prevailed for a number of years, the decline of infectious diseases in those regions was less marked than it was in districts where the old system of non-notification had continued. The result was a surprise to all who were interested in the subject ; and yet it illustrates most perfectly the fault which I have been urging upon you, that there is a shady side to our therapeutical methods, and that we must study carefully that shady side, for if we cannot always effect positive benefits, we at least should endeavor to avoid doing harm.

If you will reflect for a moment, you will discover the cause of the difference in favor of non-notification: As soon as a case of scarlet fever or measles, or any other infectious disease manifests itself in the household of a workman, mechanic, shopkeeper, or person whose daily labor might be interfered with, or whose means of livelihood might be impaired as a consequence of notification of that disease, every inducement exists for the suppression of information. Consequently a system of concealing infectious diseases grows up, as it does in this country; as it does in every large city; for it is not difficult to conceal the presence of common diseases among a crowded city population. Diseases thus concealed are far more likely to spread than if their existence is frankly confessed.

Another very interesting fact is brought out by the study of the statistical returns of England. We are told that in England—as in other countries—there has been, during the past half century, a decline in the prevalence and the mortality of infectious diseases, and we are told that as a consequence of this decline, there is a prolongation of the average duration of human life. The average duration of human life is greater than it was fifty years ago. That seems like a very gratifying result, but when we come to examine the statistics more closely, we find that this statement is delusive; that there is another side which we must take into consideration, viz., that the apparent increase of life is due to the diminution of mortality from infectious disease among young children. Counting the increased number of years lived by these young children, at first sight it appears as if there had actually been a lengthening of human life in England, but side by side with that gratifying statement comes out another fact. While the infectious diseases have diminished in mortality, other diseases not infectious in character have increased in number and in fatality; and worse still, that whereas formerly many persons lived to a great age, the number of those who reach advanced age is less now than formerly in proportion to the population. In other words, more men and women die in middle life than they did formerly. Now that is a most unfortunate result, and it should lead us to hesitate before considering the reduction of infant mortality as an unmixed good. For what does it mean? It means that in middle life, the husband, the father of the family, the one upon whom a large number are dependent, has fewer chances of living and supporting those who are dependent upon him than formerly, before the introduction of all these modern improvements.

This is the shady side of the picture which must not be ignored. Does the recognition of these facts mean, however, that we are to condemn the measures that have brought about such results? No. We need never become pessimists as a consequence of these revelations, but we should endeavor to study more thoroughly the conditions that control life, that we may be enabled to understand more completely and perfectly how to improve the health of the community as a whole, and how to bring out all the forces that operate in behalf of life and health, instead of merely attacking conspicuous but really insignificant evils. We should study more thoroughly, in connection with our therapeutics, the evils that may be done to individuals by particular methods. We need to study more thoroughly the social conditions which are active when we attempt to control and regulate the movements of disease in a community, in order that we may learn how only not to save the lives of children, but how to give increased strength to the father and mother that they may live past the period when their children are depending upon them, that they may live to see the fruits of their labor, and to enjoy in good old age the means of improving the national welfare.

FOR OBSTINATE VOMITING OF PREGNANCY.—Fluid extract of golden-seal has, according to Fedorow, proved to be an excellent remedy in the treatment of obstinate vomiting of pregnancy, and has been used with excellent success. Fedorow prescribes twenty drops of the fluid extract four times daily.—*Therp. Monatsch.*

COMMUNICATIONS.

VOCAL PHYSIOLOGY AND SYSTEMATIC VOICE TRAINING FOR THE PREVENTION OF DISEASES OF THE LARYNX.*

J. WALTER PARK, M. D., HARRISBURG, PA.

The State Medical Society of Pennsylvania in 1883, passed a resolution that there should be annual alternating addresses on the subjects of ophthalmology, otology and laryngology, but for various reasons, laryngology was omitted in 1889, hence the first and last address on this subject was delivered by my esteemed friend, Mr. Charles E. Sajous, of Philadelphia, in this city, seven years ago. In looking over his very able address, I notice he pointed out to you the importance and relationship of laryngology to the general practitioner, as well as some of the advancements in laryngology up to that time. I will endeavor to-day to give you a continuation of the advancements on this subject, but in a somewhat different line of thought, viz: the necessity of systematic physical voice training in our public schools and colleges for the prevention of some of our most prevalent diseases of the larynx. This subject has lately been considerably agitated by some of our most eminent specialists in England, France, Germany, Scotland, Ireland and America, and no doubt will sooner or later result in the systematic teaching of the proper methods of breathing and speaking in our primary schools and the systematic training of the voice in all academies, colleges, and higher institutions of learning. The object of this paper will be at least in a measure attained, if I can arouse sufficient interest in the medical profession in general, that they will give this subject serious consideration, and advocate its principles among parents, and heads of families, who have children attending schools and colleges, for by so doing good results are sure to follow. If the governing and controlling powers of institutions of learning have their attention called to this subject by physicians and scientific men in general, quacks or charlatans can no longer impose upon the credulity of the public by traveling around through the country teaching false methods, etc., when most of them do not even know the first principles of systematic voice training.

Let us take the child in its infancy as an example to begin with; when it first begins to utter audible sounds it trys to imitate its mother, nurse, or teacher, and trys very hard to formulate sounds into intelligible speech. Years are required to teach a child to phonate properly. Parents should, therefore, devote a great deal of their spare time in teaching their children how to formulate sounds into words, and articulate them properly, for by so doing, they assist them in acquiring more easily and quickly that which otherwise they would not acquire except by a great deal of extra hard labor. At the age of four to six years a vast amount of good can be accomplished by the parents previous to sending them to school, in the various breathing exercises and the proper method of pronouncing words, and to correct them for every slang phrase they may utter. When a child is sent to school, it is generally taught the art of writing by the proper coordination of its muscles in using the hand, as well as the proper position of the body while at its studies. If we thus teach them the proper method of using the muscles of the hand and body, why should we not have a teacher of vocal physiology to teach them the proper method of breathing, by chest, nasal and respiratory exercises, opening and closing the mouth, the modulation of the voice, etc., pronouncing words properly while in the act of phonation. This training should begin in the primary schools, and be continued with the proper advancements in the art, as the child advances in its studies, and extended to the time it has completed its collegiate education. There are very few colleges to-day that properly train the vocal powers of their students, and as a result a good orator or elocutionist is seldom found among their graduates; and likewise there are seldom heard on the pulpit, the platform, the stage, and at the bar, men who as specimens of physical voice training are able to speak for an hour or two and not suffer hoarseness or fatigue of their vocal organs. That is the time they should have full control of the respiratory movements of their lungs, know how to attack words at a proper pitch of the voice, and how to control their vocal cords, etc., without producing fatigue and congestion of the larynx and pharynx, which always follows when not judiciously used. Violently exercising the voice in the wrong register, and in an improper tone of the voice, must eventually produce physical harm or disease to some parts of the larynx.

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* Read before the Pennsylvania State Medical Society, 1893.

The physician must first skilfully perform his duty in seeing that the pupil can perform the proper nasal respiratory movements, by examining his nose and naso-pharynx, and removing all adenoid vegetations, and treating any existing hypertrophic rhinitis, or hypertrophy of the tonsils; as well as take notice if there are any existing anatomical malformations which might interfere with the development of proper articulate language. Stammering is most always a result of failure to observe properly, and of improper methods of teaching a child. The naso-pharyngeal diseases just referred to are also occasionally causes. The physician and specialist should first call attention to, and point out all defects in an anatomical physiological and pathological point of view, and if possible correct any existing defects and then place the pupil in the hands of the scientific voice trainer. Pharyngitis is often produced by spasmodic, jerky respiratory movements while in the act of attacking a tone, and by not knowing how to economize the breath that is inhaled, thereby producing false, harsh, and congested tones. Raising the pitch of the voice without raising the voice itself is another frequent cause of congestion of the larynx. The part that should be cultivated is the natural tone of the voice in which a person speaks with the least effort. Lenox Browne says "The lungs are the motors of respiration; the larynx the vibrating organ, and the chest, walls, trachea, pharynx, and naso-pharynx the resonating apparatus." The French actor, Talma, always made a habit of speaking in his ordinary tone of voice behind the scenes to some of his fellow actors previous to appearing on the stage, so that he could maintain the same pitch in his voice. This is an excellent habit for all clergymen and public speakers to form. Pharyngeal and laryngeal diseases would be an exception rather than the rule if this were universally put into practice. Madam Seiler says, "that if the physiology of the voice were better known and acted upon there would be few complaining singers and speakers." There is no doubt that the solid basis of the voice is a systematic and proper method of breathing; establish that first, and then begin the systematic training of articulate speech. Dr. Gordon Holmes describes the benefits of vocal practice as follows: "The general well being of the constitution is promoted by voice practice because the wider chest movements accelerate the circulation of the blood, at the same time that they cause a more ample flow of fresh air in and out of the lungs. The obstacle of expiration offered by the contraction of the glottis during phonation confers a greater penetrating power on the pulmonary air, which perforce permeats the minute bronchi, and distends the air vesicles of the lungs more effectively; thus the blood attains a higher oxygenation and greater purity, by which qualities it gains in power of stimulating the vital activities of the various tissues of the body as it courses through them. Effete matters are freely cast off, and new and wholesome material is assimilated in increased amount. The appetite, so to speak, of the various, corporeal structures become more keen, and they are thus subjected to an exalted nutrition. And, moreover, these effects have a certain permanency on account of the gains to the thoracic capacity, derived from the habitual increase of lung expansion necessitated by constant vocal exercise." Chest and laryngeal exercises in a systematic way accomplish some of the same results that are derived from a visit to the higher altitudes, such as Texas, Mexico, Southern California, Colorado, etc.

The question is frequently asked at what age should a child begin to sing, or have its voice trained. Opinions differ materially on this question. Patti was taught systematically by her half brother, Barilli, and first appeared in concert singing at the age of seven years. She sang in concert with trained singers.

Neilson was sent to Wartel when quite young. Jenny Lind was trained for the stage at nine years of age, and (it is supposed) from forcing her voice, lost it at the age of twelve years, but regained it at the age of sixteen. Others who lost their voices in a similar manner, suffered from a paralysis of the arytenoid muscles of the larynx, or vocal ligaments. Manuel Garcia was her trainer after her recovery and the "Swedish Nightingale" soon became one of the world's most renowned singers. Listen to the child as it trys to sing one of its nursery songs; notice the tone and pitch of its voice, and you will soon be able to judge the voice compass; carefully watch it and see that this compass is not exceeded by willful exertions on the part of the child. If it is, stop it at once; if not, allow it to go on by your assistance as much as possible, always being careful that it wearies not in well doing.

You will notice from these remarks that there is no set time for a child to begin to sing, or have its voice trained. That question should be left for your teacher in vocal physiology, or voice trainer to decide.

Another mooted question is, whether a child should sing in a concert or not. Wartel says "if a child is possessed of a not worth training let it sing in a voice concert." By analyzing carefully the opinions of a great many voice trainers we arrive at this conclusion: If a child has an exceptionally fine voice, which by special training would develop into an artistic one, never let it sing in concert until after it has been systematically trained and well developed in all the registers; it can not well go wrong after that. To preserve the sweet and natural tones of the child, to fit it for the stage, the platform, or the bar, it must be carefully and physically well trained when young, and it will then develop into a sweet toned singer, or an eloquent and brilliant orator, and you will thus save many a child from some pharyngeal or laryngeal disease, which it otherwise might have acquired by first singing in concert, previous to having any physical training. Many "might have been" famous singers are never heard, principally on this account.

If you thus carefully develop the delicate muscles of the larynx under the guidance of a scientific trainer, as the athlete trains the muscles of his body previous to entering the race, you not only assist in developing a nation who talk well and sing sweetly, but you assist in saving thousands of people from a premature grave to which they are otherwise inevitably doomed. Vocal physiology and systematic voice training are just as necessary as physical training is as a part of the athlete's daily work.

I do not pretend to say that all who follow these suggestions will never suffer from a cold, a sore throat, or an acute attack of largyngitis or pharyngitis at some time or another, but the probabilities are that fifty per cent of the people who are obliged to consult the laryngologist now, would not be obliged to do so were these suggestions rigidly enforced and observed. The most frequent and common ailments of the voice user from which one may suffer at some time or another are the following—catching cold,sore throat, or relaxed throat, acute and chronic pharyngitis, chronic granular pharyngitis, elongated or relaxed uvula, tonsilitis, and acute and chronic largyngitis.

Having considered the physical necessity of vocal physiology and voice training, some remarks upon the daily life of the voice user, in order to assist in the prevention of laryngeal diseases, are quite applicable before closing this paper.

Most of our eminent authors say that a man's life is controlled 1st, by residence; 2d, by ablutions; 3d, by clothing; 4th, by diet; 5th, by exercise; 6th, by amusements; and lastly by individual habits.

First. Residence. It is very important that a man or woman who wishes to preserve a good voice, should live in well ventilated rooms. They should not sleep in the same rooms they occupy during the day. They should be ventilated by day as well as by night. Drainage should be perfect so as to prevent any exhalations from being inhaled, for their injurious effects are soon noticed upon a sensitive and congested larynx. Your residence should be situated rather high and have a southern exposure if possible. As regards climate, some require a dry and high altitude, while others feel best in a moist climate and low altitude. Some can live in smoky and dusty cities, while others must live elsewhere. This should be determined by the advice of your family physician and laryngologist.

Second. Ablutions. This is a subject much debated upon and yet no strict rules have been laid down. The following are among the best. Daily baths are generally advised. In cold weather take a hot bath, rub the body freely with a flesh brush and plenty of soap (a coal tar preparation is the best for cleansing the pores and promoting action of the skin); then sponge the body or dauche it with cold water while standing in the hot, and dry the major part of the body before taking the feet out of the warm water. If there is any fear of perspiration you should lie between sheets for ten or fifteen minutes before dressing. The Turkish bath to the singer has this advantage; the inspiration of hot dry air which is so advantageous in counteracting the effects of cold, damp climates. It should be taken at least two hours after any meal. Put a wet towel on your head on entering the bath, to prevent heat stroke, palpitation, fainting, etc. Have the body shampooed lightly, and if perspiration is not active drink a glass of water. Wash the head as well as the body. Do not take a cold bath immediately afterward, but douche first with water and have it gradually grow colder. Cool before dressing and keep the body and feet wrapped while cooling. Don't take a Turkish bath oftener than twice a week in winter, and once a week in summer. Cleansing the mouth and teeth with cold water before singing and speaking should be practiced regularly. Bathing the throat and back of the neck with cold water is commendable, as it renders the skin less sensitive to cold draughts of air and prevents one from catching cold easily.

Third. Clothing. A great deal might be said upon so very important a subject, but I will merely touch upon some of the most essential points. As it is customary when going out to put on a wrap of some kind, in the same manner when entering a room be careful to remove it. Try to keep the temeprature of your body equalized, no matter where you are or where you go. If upon the stage, and rather lightly dressed, be sure to use your wraps while waiting in the dressing room between the acts.

The majority of singers and speakers should use silk or flannel underwear the entire year, especially if they are inclined to suffer from rheumatism. Others think that underwear woven in combination suits, extending from the neck, to the wrists and ankles, made of silk, gauze, merino, or lamb's wool is the best hygienic underwear that can be worn. It is especially advisable to protect the organs of secretion where damp and sudden climatic changes predominate. Regarding the covering of the neck, no singer should wear a collar that buttons above the level of the top of the sternum. The high collar of the dude, the high and tight collars frequently worn by ladies, are a great hindrance to singers and public speakers; their tendency is to constrict the throat and prevent free movement of the laryngeal muscles, and produce conjestion of the larynx and vocal cords, tonsilitis, etc., and materially interfere with all the movements of respiration.

Fourth. Diet. The two chief varieties of food necessary to maintain life; are the nitrogenous and non-nitrogenous. The former is principally found in the meats, and the latter principally in vegetables, starches, sugars, etc. Many vegetables and fruits contain nitrogen, such as apples, peas, white beans, etc., and for this reason vegetarians say we need eat no meats when all the nitrogen we need can be obtained from vegetables. Singers or speakers who do not take much exercise should eat meat sparingly, so as to prevent obesity. A singer should have an interval of about three to four hours and a speaker two hours between a full meal and the time they wish to sing or speak. Some singers or speakers become quite fatigued and tired out by the time they are half through with their evening's exercises; in such cases some beef tea or meat extracts between acts should be taken if possible; or what is still better, a raw egg seasoned with a few grains of salt and a few drops of vinegar swallowed whole fifteen or twenty minutes before using the voice, is an excellent tonic. This is exceedingly pleasant when the voice becomes dry from nervousness. Stimulants such as champagne, whiskey, brandy and the malt liquors should be used very sparingly, for the reaction that follows their use is generally of such a character as to produce a congestion of the vascular supply of the pharynx, and more harm results from their use than the good that is accomplished. "Mariani" wine, made from the cocoa leaf, has many vabuable testimonials from eminent actors and singers, but it also should be used with extreme caution, for we all know its active and exhilarating principle is due to cocaine, and who wants to become its slave. Avoid all foods that favor flatulence and have a tendency to interfere with the respiratory movements. All nuts and condiments, peppers, pickles, curries, etc., which have a tendency to stimulate the vascular supply of the pharynx and larynx. At meals tea, coffee and cocoa, should be drunk according to the taste and digestion of the person using it. As a rule they should be discarded. Numerous carbonated effervescing waters when pure are good. Kumyss is a very refreshing and stimulating drink. The light wines, such as Claret, Burgundy, and light Hungarian wines, after a hard day's work are refreshing and recuperative, but total abstinence from alcoholic stimulants of any kind is the best advice I can give you.

Fifth. Exercise. Speakers and singers should not neglect their walk in the open air for an hour or two every day. The exercise is frequently neglected for fear of catching cold, but by observing their manner of dress, exercising moderately, and not violently; is an essential which should never be forgotten. A want of sufficient daily exercise soon tends toward corpulency, and congestion of the various organs of the body is liable to be the result, and interfere materially with the movements of respiration.

Sixth. Amusements. Swimming, shooting, skating, lawn tennis, fencing, etc., if practiced with moderation are all advantageous. Limit the extent of all amusements to the moment that fatigue begins; if extended to the stage of exhaustion, evil results often follow.

Habits. Cigarette smoking is a pernicious habit, especially to singers and speakers. Tobacco in all its forms should be abstained from, principally on account of the inhalation of its fumes into the lungs, and its deleterious effects upon the heart, respiratory movements, and upon the pharyngeal and laryngeal mucous membrane in general.

Each of the main points of my subject might be dwelt upon far more extensively but having touched upon the more prominent ones, I hope that some lasting and favorable impression has been made upon your minds, and that you all may in some manner do your part toward establishing a department for physical voice culture in our public schools and colleges, and by so doing, save many thousands of human lives from a premature grave, by the prevention of many of our most common laryngeal diseases.

BRIGHT'S DISEASE.*

JOHN M. BATTEN, M. D., PITTSBURG.

J. McK., aged 40. A moulder. While putting up an iron fence, November 16, 1885, sat on cold, damp ground, the following evening was taken with chills, fever and backache. In a few days afterward I was called in and found him with general anasarca and urine almost suppressed. Upon examination of the urine I found it highly albuminous and his bowels constipated. I ordered him to take a very hot bath, wet cups to back and compound jalap powder in thirity grain doses three times a day. With this treatment continued to suit the varied conditions of the case, the patient recovered in about two weeks.

F. S,, aged 6 years. A male. In June, 1886, suffered with an intractable albuminuria and hematuria, following a mild attack of scarlet fever, which came near ending my little patient's life. The anasarca had extended all over the body, so that he looked more like an alabaster statue than a human being. This condition had developed notwithstanding I had about exhausted all remedies, internal and external, within my therapeutic knowledge, till I had lost all hope of my little patient's recovery. In this dilemma I put my patient on small doses of muriate of pilocarpine, gr. $\frac{1}{12}$, three times a day, when the anasarca and hematuria soon began rapidly to subside and my little patient recovered.

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*Read before Penna. State Medical Society, 1893.

R. S. E. A painter, a male, aged 21. Came into my office, on Sunday, January 10, 1891, complaining of dizziness and imperfection in vision accompanied with great pain in the back, loss of appetite, and bowels constipated. He stated that he had been at an oculist's in the month of May last, and that the oculist had ordered him to wear glasses. On this examination I could not make a satisfactory diagnosis. I ordered him home and to bed and to take a dose of compound jalap powder. On the following day I examined his urine which revealed albumin in it. I prescribed iodide of potash, a number of wet cups to back, and milk diet. On January 19, 1891, the highly albuminous urine became very bloody with great pain in the region of the right kidney, so great was the pain that I suspected a calculus in this kidney—I ordered wet cups applied over loins, and ergot combined with the iodide of potash. On February 7, 1891, the blood and albumin in the urine disappeared, sight became normal and patient recovered.

This patient no doubt had had albuminuria since May, when he was fitted for glasses. He gave no cause other than his business for his sickness.

In albuminuria with anasarca following scarlet fever I have found the following medication successful in many cases.

℞ Submuriat Hydrargri................. gr. iv
Pulv. Jalapæ........................... gr. vj
Antimonii et Potassii Tartras........ gr. ¼

M. ft. pulv. in chart. dividenda j. Sig.—To be given to a child five years old. After the bowels have been moved freely put the patient on

℞ Potassii Nitratis........................... ʒj
Tinct. Digitalis.......................... f. ʒij
Aquæ............. .... f. ℥vj

M. Sig.—A tablespoonful carefully given every 6 hours The frequency and size of the dose may vary according to age and condition of the patient. A hot bath may be given daily to encourage diaphoresis. The patient should be kept in bed.

M. B. A boy, 5 years old. Anasarca, convulsions and albuminuria following scarlet fever, patient very sick—I followed the above line of medication and my patient recovered.

I have found that the tincture of the chloride of iron given in suitable doses together with fresh sweet cider *ad libitum* in the convalescence of scarlet fever to be very useful remedies in preventing albuminuria. Patients should not leave the bed too soon after an attack of scarlet fever.

On Friday, October 24, 1890, R. S., aged 11 years, female, came into my office with the assistance of her mother, after having convalesced from a severe attack of typhoid fever. Her gait was shuffling, with right shoulder depressed, she complained of backache, colicky pains in bowels, loss of appetite, and inability to walk erect. I ordered her home to bed, dry cups to back and hot poultices to bowels. The following day I found albumin in her urine. I ordered her nitro-glycerin internally, milk diet, dry cups repeated to the back and hot poultices continued to the bowels. Under this treatment she did not improve. November 1, 1890, I substituted iodide of potash in five grain doses for the nitroglycerin and November 21, 1890, the urine became normal, the shoulder resumed its wonted position, the shuffling and uncertain gait disappeared, the appetite improved and patient recovered.

The cause of this girl's sickness was obscure because of the difficulty of determining as to whether the disease of the kidneys might not have been secondary to a disease of the spine which I first suspected. I finally concluded and correctly too, that the drooping right shoulder and shuffling gait were secondary to the disease of the kidneys.

In 1872 I examined and prescribed for a case of chronic albuminuria and anasarca in a man aged 50 years, addicted to alcoholism. I remember that my prognosis at first of the case was not very encouraging, but to my utter surprise and entire satisfaction the patient recovered. My treatment at first was compound jalap powder, in suitable doses two or three times a day, till the anasarca was relieved, when I put him on ten grains of iodide of potash three times a day till he recovered. The rapidity with which he recovered under a specific treatment would point to a syphilitic taint which I have no doubt he had.

On Friday, March 24, 1893, I was called to see P. D., aged 37. A saloon keeper—intemperate—occasionally got intoxicated and would remain so for a week—high liver. When I saw him he had been sick for about a month under the care of a doctor, but continued to get worse till the urine was almost suppressed and highly albuminous—and there were anemia, ascites, general anasarca of the body, constipation, orthopnea great tension of heart's action, and cough. I ordered the patient to take a hot bath, go to bed and then commence to take thirty grains of compound jalap powder every eight hours. I continued the hot baths once every day and compound jalap powder as directed for about a week till ascites and anasarca disappeared.

Then I put the patient on a tablespoonful of Basham's mixture of iron with five drops of tincture of digitalis every eight hours, one drop of nitro-glycerin in nine drops of absolute rectified spirits of wine every eight hours, alternating with the Basham's mixture, and also dry cups to back three times a week. The bowels to be kept open once or twice a day, with the compound jalap powder, and the patient to be kept on milk diet. The albumin not diminishing in his urine as rapidly as I had hoped it would do, and suspecting my patient might have had syphilis, although he positively denied ever having had that disease, on April 17, in addition to the other treatment I put him on ten grains of iodide of potash every eight hours, which iodinized him. After my patient had suffered with intense headache, swollen face, and eyelids, scanty urine, and hoarseness for three days, and after he had taken a drachm and a half of iodide of potash, I suspended all medication for twenty-four hours and wet cupped my patient over the loins. At the end of this period I resumed the Basham's mixture, tincture of digitalis and nitro-glycerin. The urine commenced to flow and my patient became more comfortable.

Sunday, April 23. The urine for the first time since I saw patient is free of albumin and he passes about three pints of that fluid daily, his appetite is good, tongue clean, and says he feels well. The specific gravity of the urine is 1,000—the bowels move once or twice a day by taking a wine glass full of Vichy water three times a day.

The following day the patient was up and about the room and passed three pints of urine with ten (10) per cent of albumin in it. He continued to be up and about his room and to pass the same amount of urine daily but the albumin in it ranged at different times from ten (10) to twenty (20) per cent. till Friday, May 12, 1893, when the urine became clear, straw colored, and free of albumin. Specific gravity 1,010. The same treatment has been continued. I think now my patient has fully recovered and he will be allowed to go out during favorable weather. The same diet will be continued for some time.

I wish to emphasize what appears to me to be a fact, that is that there are certain pathological conditions or structural changes in chronic albuminuria which should not be overlooked in making a prognosis of the case. It is a well known fact that a part of one kidney or a part of both kidneys may be diseased, whilst the healthy parts of one or both kidneys may perform the necessary functions of those organs. Again only one kidney may be affected whilst the healthy kidney will perform the functions necessary for both. In the examination of the urine of such cases albumin and casts may be presented and the physician learning these facts by testing the urine will be apt to give an unfavorable prognosis. In the case where only parts of one kidney or part of both kidneys are diseased, the prognosis would be favorable according to the extent of the kidney or kidneys involved.

We should carefully inform ourselves as to what may have been the cause of the kidney disease. Whether acquired or hereditary? If acquired, the causes of the disease should be searched after and if possible eliminated. If sedentary in his habits he should take more exercise. If intemperate in alcoholic beverages he should abstain from drinking them. If he is syphilitic specific treatment should be inaugurated. When the cause is hereditary there are many irregularities in the constitution that are worthy of study and thought, and there are many conditions arising in the course of the disease that may be ameliorated by hygiene, diet, climate and drugs.

Nitrate of amyl and nitro-glycerin relax and dilate the whole arterial and capillary system. Iodide of potash makes the heart's action more regular. Digitalis increases the force of the heart's action, but at the same time contracts the arterioles. Aconite and veratrum viride make the heart's action slower and more feeble. Convallaria makes the heart's action slower and stronger. Hydrate of chloral dilates the arterioles. The volume of blood can be diminished by blood-letting, and by eliminating the plasma of the blood indirectly by sweating, purging and diuresis. Now, no doubt, we can give relief to a patient suffering with Bright's disease by judiciously prescribing the above remedies suitable to the varied conditions which may arise in the course of the disease.

If upon examination of the urine we find albumin, we may give nitro-glycerin. If there has been a previous history of syphilis, iodide of potash should be prescribed in large doses three times a day well diluted in water, or mercury may be given in small repeated doses, or the iodide of potash and mercury may be conbined. If the bowels are constipated, we may give the compound jalap powder in suitable doses to keep them sufficiently open and soluble to accomplish what may be indicated in the case. If ascites or anasarea has made its appearance accompanied with pain in the back, we should put our patient to bed, apply wet cups to back, order a hot bath to be taken every day by the patient and give nitro-glycerin, iodide of potash or compound jalap powder as may be indicated by the condition of the patient.

If there are indigestion and nausea of the stomach we should direct our remedies to that organ by giving vegetable bitters, diluted muriatic acid, diluted sulphuric acid or alkalies.

If there is irregularity in the heart's action, we should direct our remedies to that organ, if irregular, iodide of potash with small doses of opium. If the heart's action is increased and strong, aconite or veratrum viride may be given. If weak, digitalis. If the volume of the blood is too great, we should give cathartics, diuretics and diaphoretics. In the earlier stages of dyspnea, iodide of potash in five grain doses combined with small doses of opium may effect a relief. In severe attacks of dyspnea dry cups to the chest and the inhalation of oxygen may be beneficial. In the worst cases of dyspnea it may be justifiable to keep the patient under the influence of an anesthetic. If there are convulsions opium may be resorted to; the old doctrine that opium is a very dangerous remedy in Bright's disease of the kidneys is true, yet it is equally true that it is a very useful remedy. If the patient is anemic we should give large doses of tincture of the chloride of iron and oxygen. In certain conditions one of the natural mineral waters such, as Carlsbad water, may be given.

In the later development of the disease we have restlessness, sleeplessness, headache, twitching of the muscles of the face, nausea, vomiting, delirium, convulsions and coma. To relieve these varied conditions we may resort to opium, hydrate of chloral, nitrate of amyl, convallaria, digitalis, caffein, blood-letting, sweating and cathartics.

The diet in the management of a case of Bright's disease of the kidneys is a very important feature. It would seem that nitrogenous ingesta in great part undergo metamorphoses and yielding their nitrogen to be carried off in combination with a portion of other elements under the form of urinary products of a non-nitrogenous diet or one approximating it, in the proper food in this disease notwithstanding Dr. Ephraim Cutter claims that he has seen a full fledged case of Bright's disease of the kidneys restored to health by absolute beef diet in six or more months.

Rumination in Man and its Relation to the Act of Vomiting.*

Dr. Singer, Vienna, says: The observations upon four ruminants resulted in the following conclusions:

Rumination is the expression of a nervous constitution. The further cause of the act is a relative insufficiency of the cardiac orifice of the stomach, which often opens at a time when a certain amount is contained in the organ. The mechanism of the act consists in aspiration of the contents of the stomach, in the presence of a relaxed cardia and a decrease of air in the thorax, which is produced by the act of inspiration, filling the thorax and at the same time closing the glottis; rumination can be repressed by expiration.

Physiologically and clinically this should be regarded as separate and distinct from the ordinary act of vomiting. The gastric function is inconstant and only of passing importance; the anomalous secretions of the stomach are due to neurotic conditions and require, therapeutically, only symptomatic treatment, while the *cause* of the neurosis is receiving the proper attention.

INTERESTING.—Mrs. Peachblow.—"Who is that dreadful man my daughter is talking to?"

Mrs. Seteway (angrily).—"Why, that is my son!"

Mrs. Peachblow (in confusion).—"Oh, I beg a thousand pardons. I thought it was your husband."—*Truth.*

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SATURDAY, OCTOBER 14, 1893.

EDITORIAL.

THE USE AND ABUSE OF PUBLIC AND PRIVATE CHARITIES.

No one of our great sisterhood of States has a prouder record for its charities, state and private, than has Pennsylvania. Everywhere are those enterprises of private and public benevolence which reflect the broad humanity of her citizenship. Such is the culture, the humane impulses, the local and state pride of her best citizens, that if asked "What constitutes the chief glory of your commonwealth?" they would pass by architectural monuments, the great hives of industry, the institutions that hold the hard earned treasure of struggling busy thousands and would point to the educational and benevolent institutions—those training minds to build the destinies of states, and those relieving suffering, supplying the needy and ministering to the wants of the unfortunate—which proclaim the conscience and heart of her communities and Commonwealth.

In these public and private charities the people have a profound interest and pride. We would neither directly nor by implication charge the management of the affairs of charitable or educational institutions—those enjoying the bounty of the State or the benevolence of private individuals, as tainted with any suspicion of dishonesty. We prefer to discern the good rather than the evil. Fortunately the management of these institutions is, as a rule, put or taken into the hands of men of high character, men whose social standing, public spirit and known integrity are strong guarantees of the faithful and honest discharge of duty.

Yet in connection with this management, economic and other, there are questions deserving of thoughtful consideration. The weaknesses and selfishness of human nature are to be taken into account, for those directing the affairs of these institutions are human--very human. The institutions are for a common benefit —they are of the people, and in them is the people's treasure, given with gladness, but with the desire for its security, its wise and unselfish use. To divert a penny from its legitimate or intended channel is a moral crime.

Over few of the very many institutions to which the State extends its liberal gifts from the treasure of the people, is there any state censorship. There is no auditing of accounts, no public statement by which the people are informed as to what purpose their money has been applied. The men, usually a small coterie, administering the affairs of these institutions hold a fiduciary relation to the State and community. Yet they are in no manner required to render an account to the State or to any other authority. As these institutions grow in size, needs and demands, the question will grow to be one of some importance, and should now be one of sober consideration as to whether there should not be some supervision over and above the local management; an authority to inquire into the wisdom, economy and methods of administration; an authority through which the people could be informed as to what was done with the money they had generously contributed from their earnings—whether it was all put in "brick and mortar," expended in pensioning a derelict of some old family, or devoted to the specific educational or humane purpose for which it was intended. Only those whose conduct is open to suspicion would object to having their work pass under the severest scrutiny. The authorities and the institutions themselves would gain prestige by presenting to the people of a clean bill of particulars. The life, prosperity and extent of usefulness of all institutions lie in the confidence of the people—it is the basis of their support.

It would be difficult to reason down the suspicion that much of both public and private charity is turned to selfish private advantage. No hard labor, mental or physical, is in greater demand, none is more keenly scrutinized and unsparingly criticised, none deserves higher reward and none receives less renumeration than the labor of the honorable practicing physician. Unfortunately in daily life honor and honesty are terms of relative value, and there is a very strong temptation for a doctor to apply to "professional services" what spare cash a patient may have, and then to lodge and board the patient while under treatment, at some institution sustained by public or private charity. Known instances of such practice have done much to discourage in benevolent work some of the most charitable men of the community. No charity, public or private, can live and meet the ends of its organization when its blood is sucked and its means turned from the appointed use.

In all great cities there are institutions built by generous individual charities. After a generation, sometimes not so long, the inspiration of the founder passes out of the policy of the management and the world is impressed with the idea that the managers are the owners, and that the institution represents their personal benevolence, and too often, there is very hearty feeding upon the treasure by some officials—always, in sooth, charged up to "service rendered," "service as Secretary and Treasurer," "supplies," "repairs," etc. These institutions are the legacies of the public; the people have a title and interest in them, for they are trusts in the use and abuse of which concern the community. It would be wise to keep the public informed of the methods and details in administering these trusts. Whatever inconvenience it might occasion the managers, it would teach the people the difference between genuine and "professional" philanthropy, would show the relations between the giver, the "sieve" and the receiver, and, perhaps, enable the discovery of some "value received" for "services rendered" and charged for.

We have many noble charities under

church management, a management generally broad in its humanities, wise and economical. All the details of such management pass under an examination as scrupulous as that of the affairs of banking institutions. The strong light of honest investigation honors fidelity and intelligence of good management.

Of a truth, "charity suffereth long and is kind."

TRANSLATIONS.

CONTRIBUTIONS TO THE STUDY OF EXOPHTHALMIC GOITRE.*

Prof. Müller, Marbourg, the author, gives a description of five cases which he was enabled to study carefully; four of these were acute and one chronic in their course. Of the four acute cases he was enabled to study three post mortem; in two the brain, spinal cord and sympathetic ganglia were carefully examined; the fifth or chronic case, which ended fatally, after a time, was also examined post mortem.

The vagus nerve received careful attention. Three cases studied under the microscope proved the sympathetic intact; the vagus showed in one place a marked degeneration. In all cases changes, such as scattered hemorrhages, were found in the medulla and the rhomboid fossa of the fourth ventricle; these were particularly numerous in the region of the nucleus of the vagus nerve. The author, however, places but little stress upon these changes.

The clinical picture differed but slightly between the acute and chronic cases. The symptoms of this form of disease have been frequently described in various books, which are also given in these cases by the author, to which he adds, however, a number of other symptoms. Abnormal sense of heat, profuse sweats, some slight and passing temperature changes, tremor of the hands, rapid emaciation with great weakness, while there appeared upon the skin abnormal pigmentation, change of voice, vomiting and diarrhœa; the last two, occasional symptoms. The patient suffered from a constant restlessness and excitement

In studying all these symptoms the author concludes that the cause of this disease is not found in one or other portion of the nervous system, but that the brain is undoubtedly also a centre of the affection.

Müller concludes that, without doubt, the etiology of this disease can be sought for as a result of fright or deep distress. In case I. the symptoms followed immediately after a severe fright and ended in the most acute form. In case V. the attack was preceded by deep distress and care, the patient having been made homeless owing to an illegitimate new born infant. One can scarcely understand that the psychical influences should have such a direct action upon the thyroid gland, and the only explanation is that the production of this disease is governed by two factors; first, the anomalous function of the thyroid gland; second, a hereditary neuropathic tendency, or that produced by shock or distress. It is quite probable that neither of these two factors alone would produce the disease,—only when they have combined can this occur. The author is extremely anxious to hear the experiences of others, principally that of surgeons.

Etiology of Acute Articular Rheumatism.*

Prof. Sahli, Berne, begins this article by stating that acute articular rheumatism is probably an infectious disease, and mentions Huter as the first who called attention to this fact, presenting some points for this statement. He calls attention to the acute rise in temperature. which is usually an attribute

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*Abstracted from *Deutches Archiv. fur Klinische Med.* Bd. 51, hft. 4 and 5, and Translated for The Medical and Surgical Reporter by Marie B. Werner, M. D.

to infectious diseases, and also to the local affection of the joints, in which the resemblance to septic or pyæmic joint affections make the differential diagnosis most difficult. In addition to this he considers the relations between articular rheumatism with endocarditis and the affections of serous membranes, often present, a resemblance to pyæmia. The resemblance becomes still more complete in comparing the case bacteriologically. The granulations on the endocardium, so often present in acute articular rheumatism as well as in pyæmic endocarditis, will show the presence of similar microörganisms.

In addition to this the author reports a case of typical acute articular rheumatism which was complicated by endo- and pericarditis and pleuritic exudations. The history of the case, fully given, reports the result of a careful pathological examination, which showed the presence of staphylococcus pyogenes citreus in the blood of the left heart, in the swollen bronchial glands and in the various exudations of the pericardial and pleuritic cavities.

The author concludes his remarks by stating that the bacteriological investigation of the reported case, proves that the so-called complications of articular rheumatism (endocarditis, pericarditis and pleuritis) belong etiologically to the disease in question and therefore cannot be regarded as complications but, as localizations; and further states that in a number of other cases of acute articular rheumatism a study of the blood and the secretions of the diseased joints proved the presence of staphylococci.

*FATTY DEGENERATION OF THE HEART.

The author, Dr. Krehl, Jena, has given much time in studying the various degrees of fatty degeneration of the heart muscle. The only method which gives satisfactory results regarding this question, is the chemical. In order to study this carefully Dr. Krehl took the heart from a corpse 10 to 16 hours after death, cut from it certain portions which were necessary for his study, since the heart contains varying quantities of interstitial fat from 80 to 120 grains in the muscle. This is done by extracting the water from the muscle, then drying and pulverizing the same, and lastly making an extract with ether by which he found that he was able to divide it into lecithin and fat. Previous experiments had satisfied the author that, contrary to former theories, the high temperature necessary for drying did not destroy lecithin in any appreciable quantities.

The percentage of water contained in a healthy heart amounts to about 79.5 per cent. In pathological conditions it is usually increased more or less; the increase is greater in cases of tuberculosis than in phosphorous poisoning or in pernicious anæmia. The quantity decreases in a direct ratio in cases of carcinoma, sarcoma, valvular disease, chronic nephritis and chronic myocarditis.

The substances of the normal heart, soluble in ether vary between 8.3 per cent. to 13.4 per cent., while lecithin fluctuates between 4.2 per cent. to 4.6 per cent. The causes of these variations in the normal heart are unknown. In disease the amount of lecithin varies greatly; the cause of this is also unknown, but the author feels certain that it is not due to the changes in nutrition nor to the presence of fever.

The proportion of fat varies in different diseases; it is increased in poisoning by phosphorus(to double the normal amount), in isolated cases of pernicious anæmia and tuberculosis. No increase is shown in the chronic cases of myo- or endocarditis.

The cause of fatty degeneration is not to be sought in the decrease of oxygen or in the increase of temperature, nor in the presence of local inflammatory heart disease. The author is inclined to accept the hypothesis that the changes in metabolism which lead to fatty degeneration, are due to the circulation of poisonous materials in the blood which are at present not fully understood. The author has studied and illustrated this subject carefully and presents a number of tables to explain his line of thought to the interested student.

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ABSTRACTS.

THE EARLIEST MEN.

At the recent meeting of the American Association for Advancement of Science, profound interest was awakened by Dr. Daniel G. Brinton's address on "The Earliest Men." How did they come into existence? By special creation. Everything is special. The whole species is made up of special individuals; and their evolution is multiform. Scientific men are agreed that the human race did in some way arise from some inferior animal form—not necessarily monkeys. The transition may not have been gradual, but abrupt—evolution per saltum. We do not find the "missing link;" it is still missing; it may be forever missing. There are different opinions as to how many early men there were. There may have been several distinct centers, but science as well as orthodoxy points toward the conclusion that all men originated from one primal pair living in one definite place. When did these early men appear? A perplexing question. We used to be told that it was 6,000 years ago; but we now know that there were at that time thousands of men living in Europe, Asia, Africa and America. It may be that we have misunderstood tne Biblical record, or that it may have concerned a single branch of the race. It is certain, however, that man appeared late in the geological history of the globe. Human remains have been found in half a dozen places in the world under circumstances that seem to show that man lived in the Tertiary age, but the proof really seems meager. Did man appear during the great Ice Age? The testimony from ancient caverns whose mouths had been sealed by drift, and whose contents lay hidden under stalagmitic floors, as well as that gathered from stratified gravels and other sources, proves that man probably did inhabit the globe during or even before the Ice Age. The date of that age is not exactly fixed, but was probably about 50,000 years ago, although some men of science have assigned a less and others a greater period than this.

Where did the earliest men make their home? Manifestly there were certain conditions requisite. Man requires food and generally some kind of clothing. We many reason by exclusion. The first men did not inhabit an island, for they could never have got off. They did not live where it was very cold, because they would have perished. The greater portion of the northern hemisphere was under water at the time of their advent, hence that is ruled out. They could not have lived in Australia nor in Southern Africa on account of climatic conditions and for other reasons. In short, we find them limited by conditions to the area between the Himalayan Mountains and Spain. Practically the oldest remains yet found have been discovered in the most densely inhabited regions of Europe. The sacred record treats of a particular line of human beings. The fable of the lost Atlantis and the theory of Haeckel as to the submerged Lemurien are not tenable. Eurasia was certainly man's original birthplace.

What did the early men look like? Were they altogether rude? Did they creep on all fours or walk erect? The most expert anatomists have decided, after examining the ancient bones that have been exhumed, that there is no more difference between ourselves and those early men than there is between ourselves now. They were doubtless sturdier. They did not trouble themselves as much about dress as we do. They had reddish hair and probably a ruddy complexion, with blue or gray eyes. Their skulls were about as good as ours, except the famous one of Neanderthal, for which we have less respect than we used to have. In a word, they were men, They knew how to make a fire. Even the very oldest of all men knew that wonderful art. They also knew how to make tools from stone, wood and horn. They were conversant with a variety of instruments and tools. They had weapons with which they killed huge animals. They knew about boats. They had dwellings. They were socially inclined and lived in communities. They were brave and had wars. They endured hardships. They had good hearts and loved one another. We have positive proof that they took care of the aged and nursed the invalids among them. They had some kind of language and knew something of music. We cannot positively say that the very earliest men worshiped, but if they did so, their worship was spiritual. They had do idols. They had some sense of beauty. They decorated shells. They carved the horns of reindeer and tusks of mammoths. Those first men could travel rapidly. They encountered no very dangerous enemies. We can easily see how there came to be varieties among them, for more changes are now going on than ever before. All shades, from black to blond, are easily explained. We may safely conclude that the early men were essentially human and very much like ourselves, with hearts and brains, hopes and fears, woes and aspirations like our own.—*Scientific American.*

MEDICAL EDUCATION IN THE UNITED STATES.*

J. COLLINS WARREN, M. D.†

The rising generation of teachers were not content with the antiquated methods of a previous century; they had learned of a new order of things in the centers of medical learning in Europe. As the old generation of teachers went out and a new one came in, the modern ways of teaching grew into a substantial system which had come to stay. Harvard adopted the graded course of three years' study, but she did also far more than that—and in this respect she stands in advance of almost every other school in the country—she lengthened her course to nine months, so that her two terms correspond with those of the other departments of the university and represent a full year's work.

I will not undertake to record the history of the reform in medical education since that time; it is familiar to most of you. The example which has been set to the rest of the country by the University of Pennsylvania and by the College of Physicians and Surgeons of New York is too well known for me to repeat them here.

While criticising, as I have done, the work of a previous generation, I ought to remind you that our forefathers accomplished what they did only by individual efforts. There were no governments, and as a rule no liberal benefactors to back them in their undertakings. Their schools had to be conducted on business principles, with a keen eye to the practical success of their venture. During the past twenty years, it is true, a number of State universities have been established. In the University of Michigan, and possibly in one or two other State universities, the medical professorships like those of other departments, are sustained by the income from the general endowment, independent of fees derived from medical students; but, as a rule, the success of the school has depended upon the patronage which ithasreceived. It may be justly said, therefore, that the whole system of medical education in this country is the spontaneous outgrowth of the work of the medical profession, and that it is due to their public spirit and disinterestedness that so important a department in the educational development of a great nation has been brought to its present state of excllence.

The good work has, however, but just begun. The reform of medical education is still in its infancy. If we are to believe all the glowing announcements which we read in the annual catalogues of the various schools, we might be lulled into a sense of calm security for the future; but, unfortunately, the actual practice of many, I might say a majority, of the schools does not come up to the ideals which are here set forth.

The essential points in the new scheme of education have been well stated by our President, Dr. Pepper.

1. The establishment of a preparatory examination.
2. The lengthening of the period of study to at least three full years.

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*An address delivered before the Section on Pedagogy of the Pan-American Medical Congress.

†Professor of Surgery in Harvard University. President of the Section.

3. The careful grading of courses.
4. The introduction of ample clinical and laboratory instruction.
5. The establishment of fixed salaries for the teachers.

In a general way we may obtain some notion of the improvement which has been made by a study of the report of Illinois State Board of Health for 1891. According to this report there are now 148 medical schools of all kinds in the United States and Canada. The number of those requiring certain educational qualifications for matriculation is 129.

The number of schools requiring attendance on three or more courses of lectures was, in 1882, twenty-two. In 1891 the number was eighty-five.

There has been also a gradual increase in the duration of the lecture terms from an average of 23.5 weeks in 1882-83 to 26.3 weeks in 1890-91. In 1882-83 there were eight colleges that had but sixteen weeks; the number of colleges having terms of six months or more is now 111. The number of colleges which have graduated students at the end of the second course of lectures the present year is less than 10 per cent. of the whole number of schools in the country.

There are now in the United States thirty-two examining and licensing bodies that do not give instruction. Although the work of these licensing boards is far from uniform, a great deal has been accomplished by them. There are at the present time fifteen States with Practice acts that require an examination of all persons desiring to practice medicine in the respective commonwealths. These States include nearly 50 per cent. of the entire population. In many States the whole complexion of the medical practice has been changed by the clarifying influences of these bodies. The reports on medical education by the Illinois board, I do not hesitate to say, have exerted a more powerful influence on the movement in education than any other publication which our medical literature has produced.

The effects of these Medical Practice acts which establish a minimum of time spent at medical lectures and provide an examination for those who wish to become practitioners, are shown in the statistics which have just been given. At the present time State examinations are required in Minnesota, North Dakota, Montana, Washington, North Carolina, Alabama, Florida, Virginia, New Jersey, New York, Nebraska, Maryland and Utah.

Millard, who has had experience in framing the act of Minnesota, believes that it would be an improvement upon the Medical Practice acts at present in existence, to separate the two functions of the board, the licensing power and the educational supervision. He thinks that the best interests of the public will be observed by assigning the duties of the State licensing power to the various State Boards of Health. The regulation of all forms of education should, on the other hand, be vested in a central power consisting of a single board, to be known as a State Bureau of Education, with power to regulate all educational institutions granting degrees, together with the power of granting charters and revoking the same; particularly should this apply to all institutions wishing to afford the community any of the various forms of higher or special education.

Having thus sketched the progress of medical education up to the present time, let us now glance at some features of the present system in which it is desirable that further improvement should be made.

The importance of a preliminary training for the study of medicine is a problem which has occupied the attention of our most prominent teachers. That the medical student should have received a fair amount of education goes without saying. The importance of a proper preliminary education, is thus forcibly stated by that most experienced of German teachers, Professor Billroth. He says in reply to the objection to a preliminary study of the natural sciences as a basis of a medical education:

"The educated of all nations should not fail to encourage to their utmost, knowledge and study—in all countries and stations of life they should not fail to maintain the standard which they have set up, both for themselves and others; they should not fail to support the government in all efforts directed toward this end.

"The physician, the lawyer, the school teacher and the clergyman form the nucleus of culture in the community;

they are, especially in the country or small town, the representatives of the educated element of society. The people seek their advice in time of need, and they are their sole source of knowledge in many things.

"To neglect the education of such persons, to lower their mental and scientific standard, to bring them up so that they know no better education than the tradesman, the tailor and the cobbler, would be, in my opinion, the suppression of the educational development of a nation and is a policy both corruptible and immoral in principle, as it would inevitably ruin a nation and bring it prematurely to that point of decadence where it would become the prey of others."

The importance of these views is fully appreciated in Germany, where the professional schools are integral parts of the university, and entrance to the professional schools depends upon the previous completion of the course in philosophy, a course which corresponds to that of our academic degree.

In Dr. Holmes' suggestive article on this subject it is shown that while the increase in the total number of medical students has been very great during the last decade, the increase in the number of "college men" who have entered the profession has been very slight, and in some of the more prominent schools the percentage has even slightly diminished. The author says: "It can not then be doubted that relatively a smaller number of medical students have a bachelor's degree than in 1880, though the education of the average medical student is superior to the average medical student ten years ago." Although the proportion of medical students to students of law and divinity is greater in the United States, the relative proportion has diminished in the last ten years, whereas in Germany in the same period, a period during which medicine has become more of a science and the domain of surgery has increased under antiseptic methods, the proportion of medical students to the students of other professions has greatly increased. The reason for this variation in the proportion of students in the two countries is explained by the imperfection of our system of education. Educators have not had proper control and medicine has not been placed upon that dignified scientific basis which it enjoys in Germany. Dr. Holmes complains that the medical department is neglected by every university in the United States. "It is farmed out or left to shift for itself."

Harvard has recently made an attempt to overcome the difficulty by a modification of the academic course. As Welch points out in an article on this subject. If a young man choose the medical profession he should devote at least four years to medical studies, including the preliminary sciences. If he supplements this with a year in a hospital and a year or two in study abroad, and all this work has been preceded by a college academic course, he would not be able to enter upon the practice of his profession much before the age of thirty.

Dr. H. P. Bowditch, dean of the Medical Faculty of Harvard, has strongly advocated a change which would overcome this difficulty. The average age of students who enter the Harvard academic department, as President Eliot has shown, has been gradually rising during the whole of this century until it has reached nearly nineteen years. The student who enters the medical school therefore finds himself just beginning the preparation of the real work of his life at an age when many of his contemporaries are already engaged in the productive work of their professions. In Germany the best class of students begin their professional studies at a little earlier age than that at which our young men enter Harvard College. As the course of study leading to the degree of doctor of medicine lasts five years, it follows that the German physician is ready to begin practice before he is 23½ years old.

The average age of matriculants at Oxford is 18 years, and it is perfectly possible for an Oxford student desiring to study medicine to begin his purely professional studies before the end of his second year of college life. The dean writes me upon this subject as follows:

"There are many students in our school who have had one or two years of college life either as special or regular students, and these have entered the medical school because they have felt the necessity of getting started in their life work. These men would have been glad to take the A. B. degree if it could have been procured in a shorter time, but they consider it too dearly purchased when it involves so much delay in beginning their professional life."

It seemed, therefore, reasonable to the medical faculty of Harvard to make the following proposition, namely, that the academic council should consider the expediency of granting the degree of A. B. to all undergraduates who should subsequently take the longest course of study offered at the professional school after three years' attendance in the academic department—the professional degree and that of A.B. to be given simultaneously at the end of the professional course. One of the medical studies at least can be obtained in the usual college curriculum, and general chemistry is frequently "anticipated" by students who enter the medical school. It is hoped, indeed, that this course will soon become one of the "priliminary studies" to medicine. It would be a short step to place one or two more of the scientific medical studies on the list of academic electives, and a whole year could be thus anticipated. The relations of professional schools to the university are not appreciated in the same light that they are in Germany, and the proposition of the medical faculty after much discussion was finally declined. The advantages of a more intimate relation between the medical school and the university are clearly set forth by Welch in the article referred to. The duplication of laboratories is thus avoided, and men of different branches of sciences are brought more intimately together. The important departments of botany, zoölogy, and comparative anotomy cannot fail to have an elevating influence upon the work done in a medical school. How much more rapidly might not original investigation progress when different branches of science work in a common cause. It is here that the great strength of German science and progress takes its origin.

A movement in the same direction is the establishment in our colleges and scientific schools of courses of tuition, intended specially for the benefit of those who intend ultimately to study medicine. Such a course has been planned by Prof. Shaler in the Scientific School of Harvard, and a similar course is offered by the Institute of Technology.

Professor Shaler's course preparatory to medicine consists of two years.. In the first year we find physics, zoölogy, botany, general chemistry, rhetoric and elementary French or German, and freehand drawning among the studies required.

In the second year there if botany, zoölogy, comparative anatomy, geology, comparative osteology, physics, qualitative analysis and themes.

It is certainly to be hoped that the medical teachers of the United States will not remain content with the very elementary examinations which are now demanded for those students who have not received a college education.

The advantage of a previous college training is shown in some statistics given by Billings of examinations conducted by the examining boards of the army and navy. Of those candidates who had a college degree 34 per cent. were successful, and of those who had no such degree 28.9 per cent. succeeded. It is interesting in this connection to note that taking the medical schools of Harvard, Yale, the College of Physicians and Bellevue Hospital of New York, the University of Pennsylvania, and the University of Virginia together, 46.1 per cent. succeeded, while for all the rest of the schools in a body 22.3 per cent. succeeded.

Another subject which is receiving more and more attention yearly is that of clinical instruction. The weakness of this feature of medical education was one of the glaring faults of the old system, and arose out of the fact that hospitals were far less numerous than they are at the present time, and that, from the necessities of the situation, the independent origin of the medical school became a custom which has continued almost unimpaired to the present day.

In Boston the medical school flourished for nearly one-third of a century before its teachers realized the importance of this problem. A circular was then issued in 1810, in which the statement was made that "a hospital was an institution absolutely essential to a medical school." Would that all teachers of that time had realized sufficiently that fact and had educated the public to recognize the necessity of such a close relation of the two. Many of the older members of this congress can remember the old-fashioned prejudice which resented the intrusion of students into the hospital wards. The theory of the trustee of that time was: This money was given for the cure of patients and not for the education of physicians. They could not be persuaded that the two interests were identical.

The change of feeling in more enlightened times was indicated by the benefactor of the great Johns Hopkins hospital. At the opening of that hospital in 1889 Dr. Billings showed the advantage of such a union in the following words:

"It is well known to those familiar with the subject that the sick in a hospital where medical instruction is given receive more constant, careful and thoughtful attention than do those in a hospital where no such instruction is given. The clinical teacher must do his best; keen eyes will note every error in diagnosis, every failure in results of treatment. Moreover, the very act of teaching clarifies and crystallizes his own knowledge in attempting to explain, the dark places become prominent and demand investigation, and hence it is that those cases which are lectured on receive the best treatment. I need say nothing here on the other side of the question; the value of properly trained physicians to the community and the necessity for hospital instruction in such training. John Hopkins understood all this, and especially directed that 'in all your arrangements in relation to this hospital you will bear constantly in view that it is my wish and purpose that the institution shall ultimately form a part of the medical school of the University.'"

The reaction in favor of clinical teaching is becoming daily stronger and stronger, and no school can hope to complete with the great schools of the country which does not have control of what is usually called "clinical facilities." This term must unfortunately still be used; for the number of schools which have a hospital of their own is yet exceedingly small. The union between the two is in most of our large cities becoming a more and more intimate one.

Another immense advantage which the possession of a hospital gives to a faculty is the control of appointments. Most schools are now obliged to select their teachers from members of the staffs of hospitals in their city who have services at times of the year which enable them to teach. These individuals are appointed by laymen who have no knowledge of or regard for the necessities of medical education. Faculties thus placed are unable to select teachers of national reputation, as there is no appointing power which enables them to give such a person the material with which to teach. This is a grave defect in our system, and one which the leaders in medical education should not forget to impress upon the profession and the public.

But, while applauding the movement in favor of clinical teaching it is perhaps well at the present time to consider whether systematic or, as it is usually inaccurately called, "didactic" teaching should be abandoned. The discussion as carried on in medical journals, appears to lean in this direction. A course of systematic lectures enables the teacher to cover ground which he would be unable to do, even in a clinic most richly endowed with material. The method of handling the subject differs entirely from that adopted at the bedside, and in a well regulated four years' course I believe the systematic lecture should still retain a prominent place. Clinical instruction should be abundant and of the most varied kind. Instruction of the class in small sections is a most desirable feature of this department. It involves a greater expenditure of time, an increase in the teaching staff and great ability as an organizer in the head of the department. It is the squad drill, however, which brings the student in most intimate contact with disease.

To carry out these ideals necessitates a "plant" far in advance of that which the average school now possesses. No such enterprise can be undertaken without that aid which has hitherto been conspicuous by its absence. I refer to endowments; the valuable paper of Dr. Bayard Holmes already referred to gives some interesting data on this subject. He says:

"The productive funds in the hands of medical schools, both those connected with and those independent of universities in the United States was in 1889, $249,200, while at the same time there was in the hands of schools of theology productive funds to the amount of $11,939,631. The value of buildings and grounds used by medical schools at the same time was $4,047,618, and the theological schools were accommodated with buildings and grounds valued at $7,762,095. The medical schools had in 1889, 12,238 students who paid tuitions to the amount of $763,761, while at the same time the theological schools enrolled 6,989 students.

I am able to reinforce these figures by an abstract of the statistics for medicine, theology and technology as reported to the Bureau in June, 1892. The medical schools possessed buildings and grounds in 1892 valued at $7,507,937, and productive funds amounting to $611,214. Medical departments of State universities also received State aid in 1892 amounting to $40,500, which, if capitalized at 5 per cent., would be equal to an endowment of $810,000; making a total endowment of $1,421,214. There were 16,731 medical students in attendance.

The theological schools report productive funds amounting to $17,599,979, and stated, at the same time, the value of their buildings and grounds was $10,720,860. They had 7,672 students in attendance.

Technological schools report productive funds amounting to $13,229,940. These institutions received from State appropriations or municipal aid in 1891-92, $747,504, which, if capitalized at 5 per cent., would be equivalennt to an endowment of $14,950,080; making a total endowment for schools of technology of $28,180,020. There were enrolled in the schools of technology 10,921 students, about one-third of whom were in preparatory courses. It will thus be seen that the endowment of theology is increasing at the rate of about two million dollars a year. The technological schools are well provided for, but medicine has scarcely raised its endowment, even at the most liberal estimate, to a million and a half."

Probably the available funds possessed by our medical schools are somewhat larger than these statistics show, but they give the proportions which are needed to impress upon us how little financial encouragement medicine receives. When we realize what a valuable factor the medical man is in the rapidly increasing development of the territory of a vast and prosperous country like ours, it seems as if his claims to receive encouragement should be listined to. He does not build railroads or organize society in new lands but he is in the foremost rank of pioneers, with the complete equipment which our teachers can give to-day, and he becomes a most valuable member of society. He protects the young colony from epidemics; without him State medicine could not exist, and States could not be provided in a bases which could ensure prosperity.

These ideas should be impressed upon our men of wealth and upon the State governments as well. In the meantime it is important that we should adopt as a principle in our new departure in education that the medical faculty should have personal control of hospital wards and management. Let this work begin in a small way at first, but with a view to future development. Such a change can only be brought about by a slow process of evolution. The sooner, therefore, the principle is recognized and adopted, the better. It is difficult for a prosperous school which has abundant opportunities for bed-side teaching to realize this, but it can not develop beyond a certain point until it has established its own independence.

Diarrhœa Caused by Infusoria.[*]

Of the four cases reported by Dr. Roos, of Kiel, of persistent diarrhœa, the first was due to megastoma entericum and trichomonas intestinalis; the second was caused by balantidium coli; the third by cercomanos homanis; the fourth was produced by a moderately large infusoria which has not yet been described, but could be compared to the oxyuris in form.

The fifth case of intestinal catarrh was complicated with retarded action of the intestines; there were found besides the trichomonas intestinalis and megastoma, those described by R. May. After the continued and regular doses of calomel, the infusoria were killed and the intestinal catarrh cured.

The author does not consider the infusoria as a direct cause of the intestinal catarrh, but feels that they are, in a measure, the cause of the long duration of the diarrhœas.

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[*] Abstracted for The Medical and Surgical Reporter by Marie B. Werner.

CURRENT LITERATURE REVIEWED.

THE AMERICAN GYNECOLOGICAL JOURNAL FOR JULY.

Dr. George Erety Shoemaker discusses the

Non-Operative Treatment of Salpingo-ovaritis; Its Results and Limitations.

The author urges that removal of the appendages should not be performed until other treatment, known to be carefully applied, has failed. He is also guided as to the prognosis without operation by the amount of organized adhesions, and to some extent by the amount of prolapse of ovaries. In deciding whether or not adhesions are insurmountable in any case he advises a patient trial of iodine or ichthyol, boroglyceride tampons, elastic wool packing and careful stretching. Palliative treatment has a field, not only in those cases where the anatomical lesions are not considered great enough to call for operation, but also in a few instances of serious type, where the patient or her family absolutely refuse operation, and where the alternative is preferred of prolonged treatment and the risks of pelvic inflammatory attacks. In regard to the prospects of non-operative treatment in non-purulent salpingo-ovaritis, he says that the idea of a permanent and absolute cure must be dismissed, on account of the likelihood of a relapse. Still, patient and carefully conducted treatment in the intervals between the relapses is capable of very greatly improving all local symptoms, if not of removing them for the time being. In the treatment, every attention must be given to general measures, which will extend all the way from a typical "rest cure" and its attendant round of extra feeding, passive electrical exercise, massage and seclusion, down to the tonic for the factory girl and the advice to go out of doors. Locally, the use of elastic wool tampon, each piece best covered with a thin layer of cotton, to prevent irritation, has a large influence in gradually correcting displacements, and, by supporting the vessels and exerting a mild pressure, in lessening congestion and hyperplasia. While the author has never practiced systematically the massage methods of Thure Brandt, he is confident that, with the milder degrees of adhesion, persistent stretching by the bimanual method, to the limit of safety and of easy toleration, will release many a fundus and many a tube that at first seemed fixed permanently. Where much tenderness is found, a useful addition to the wellknown boro-glyceride tampon is ichthyol, which when made into an ointment with four parts of lanoline, may be put on the tampon against a tender region. This substance seems to have a decided influence over subacute inflammation, and has served to lessen tenderness more rapidly than anything else in his hands. Where endometritis, exists, serious effort must be made to cure it. As far as the author's experience goes, the securing of drainage by moderate dilatation of the cervix and a thorough use of the curette, if done systematically under ether, with a careful preparation of the patient and an aseptic field,is not only not followed by an increase of trouble higher up, but is the most hopeful treatment of endometritis which is not itself dependent on tubal disease. Pessaries are of no use until all adhesions have been released and the organs are first normally replaced; that is therefore late in the treatment. The author lays stress on the point that the so-called conservative treatment of tubo-ovarian disease is a misnomer, and is to be condemned in the more decided cases, especially where pus exists. The treatment outlined above is not applicable to pus cases.

Dr. Marcus Rosenwasser contributes a paper on

The Indications for Operative Treatment in Extra-uterine Pregnancy.

The author presents the following conclusions:

First.—To prevent free hemorrhage, remove the unruptured sac whenever a presumptive diagnosis is made.

Second.—Operate early in all cases of *free* hemorrhage.

Third.—In cases of *circumscribed* hemorrhage, operate for definite cause: (a) Recurrent hemorrhage; (b) growth of surviving fetus; (c) suppuration of mass; (d) interference of vital functions by pressure.

Fourth.—Early operation is advisable in advanced ectopic pregnancy, but circumstances and individual experience justify deviation from the rule.

Dr. T. J. Crofford reports

A Fibroid Tumor Complicating Pregnancy.

When the patient was first seen she had been in labor for six days and was too weak, in the opinion of the attendants, for any radical operation. The tumor was so situated that symphysiotomy would not have given relief. It was therefore decided to deliver her by traction, which was finally accomplished after manipulation of the tumor; As the result of manipulation of the tumor, sloughing took place for which the appendages were removed on the seventeenth day after delivery, as, up to this time, the attendant thought the growth to be ovarian. Section revealed its true nature. The patient finally recovered in spite of the fact that the tumor continued to slough and was removed with a portion of the uterus by morcellation.

Dr. Frank W. Talley furnishes a "Report of a Case of Supra-vaginal Hysterectomy by Baer's Method." The patient died of septicæmia from the drainage tube.

The remaining paper is by Dr. J. M. Baldy on "Vaginal Hysterectomy for Prolapse."

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

For October. Dr. W. Gilman Thompson contributes a paper on

A Study of Addison's Disease and of the Adrenals.

As the result of his observations and of experiments on animals, he comes to the following conclusions:

First. That Addison's disease is a condition arising from and dependent upon irritation of the abdominal sympathetic nerves through lesions of themselves, their ganglia, or diseased supra-renal capsules.

Second. In the great majority of instances (fully 80 per cent.) the disease originates as a secondary or primary tuberculosis in the adrenals, and the sympathetic system is either involved by extension of pathological processes, or is functionally disturbed and irritated through the intimate anatomical connection existing between the adrenals and the relatively large number of nerves which they contain.

Third. Actual lesion of the sympathetic system, while far more common than heretofore supposed, is not necessary to produce the varied symptomatic phenomena of the disease. Functional disorder, through irritation conveyed from the adrenals, may sometimes cause all the symptoms—just as in chorea and in many of the conditions of aggravated hysteria, and other functional nervous disorders, we are often unable to find definite lesions.

Fourth. In a certain proportion of cases (not over 20 per cent.) the adrenals are affected by some other lesion than those of tuberculosis, or else they remain normal (in 12 per cent.) and the sympathetic nerves and ganglia are alone diseased.

Dr. Harold C. Ernst contributes a paper on

The Bacillus Pyocyaneus Pericarditidis.

The author presents the following differences between this organism and those with which it has been possible to compare it:

1. *Macroscopic.* 1. The bluish-green tinge of the gelatin in plate culture, as seen by reflected light, as distinguished from the yellowish-green tinge of the others.

2. The dryness and metallic lustre of fresh colonies and the bluish-green color, by reflected light, of old cultures upon agar agar, as distinguished from the moist elevated fresh colonies, and nut-brown color, by reflected light, of old colonies of the others.

3. The greenish color of the colonies in peptone solutions of varying strength as distinguished from the bluish color of the other bacteria tested with it.

4. The very much greater rapidity and intensity of the reaction of gelatin and bouillon cultures to acids (red color) and alkalies (grass-green).

II. *Microscopic.* The variations in its appearance under the microscope.

1. From gelatin, indistinguishable.

2. From peptone, long, slender rods, as contrasted with short oval ones.

3. On other nutrient media, its general average as a larger rod, which can be made out by comparative examination, but is hardly subject to measurement. It can be seen, however, in preparations from egg-albumin, bouillon, blood-serum, and potato. Only upon gelatin and agar there is no appreciable difference.

It appears, therefore, justifiable to conclude that we are dealing with a distinct variety of the bacillus pyocyaneus, and that Gessard's conclusions that there is but one is unfounded.

The paper is illustrated with a colored print of a cover-glass preparation of pericardial fluid showing the bacillus in comparison with the bacillus of tuberculosis.

Dr. V. P. Gibney discusses the

Final Results in Tubercular Ostitis of the Knee in Children, Commonly Known as "White Swelling."

The author cautions against the danger of overlooking the disease in its onset and diagnosing the case as one of sprain or rheumatism. The mistake is due in most instances to carelessness in the examination. The joint functions should invariably be tested and compared with those of the other side, both limbs being devoid of clothing. In regard to treatment, he advocates what he terms the protective method, meaning thereby immobilization of the joint until all acute signs have subsided and convalescence can be safely predicted; the use of an apparatus that prevents concussion or jar—in fact trauma of any kind—whether in the shape of a peroneal crutch or axillary crutches. He does not class under protection splints the ordinary extention apparatus, because the adhesive plasters with which traction is secured slip, and the skin and deeper tissues themselves move, so that jar or trauma is not prevented. The apparatus he prefers consists of a posterior splint, with a high shoe on the sound foot.

The paper contains exhaustive statistics as to the results obtained by various methods of treatment.

Pneumonia of Delayed Resolution and Fibroid Phthisis in Childhood

Is the title of an interesting paper contributed by Dr. George Carpenter of London, Eng. The author states that in his experience, cases of retarded resolution in association with pneumonia have been found, with a solitary exception of basic pneumonia, in those showing an apical, or the upper and part of the lower lobe distribution. In opposition to Wilson Fox, the author insists that bronchial dilatation *per se*, is no more capable of inducing lung fibrosis than inflammatory lung mischief without bronchial attachment is competent to cause dilated tubes. Bronchial dilatation and peri-bronchitis are frequently met with in bronchitis or broncho-pneumonia, but only as part of the disease—of the same morbid inflammatory action.

Cirrhosis of the lungs is not so very uncommon in childhood, and in the diagnosis the position of the heart is of importance. In left-sided lesions the organ may be uncovered, exposing a large portion, or the whole of its surface, with consequent diffusion of the impulse; or contracting adhesions with the lung, the heart may be displaced. The condition has to be separated from chronic pleurisy with effusion, for, as regards auscultatory signs, there may be but little to choose between them; the position of the cardiac impulse, and the positive or negative results obtained from one or more exploratory punctures, should determine as to its nature. Puncture in cirrhotic cases is not, however, without danger. The disease has also to be separated from an invasion of new growth in the lung. Attention directed to the mediastium, which is almost always attacked, should prevent any difficulty in this direction.

The pneumonia of delayed resolution is, *per se*, not dangerous; it becomes so if resolution does not come to its assistance. In such cases, as far as the experience of the author goes, the rubbing in of some mercurial ointment, such as Scott's ointment, has appeared to him to be of value. In addition the general health must be improved in every way by tonics; iodide of potassium internally, good feeding and change of air. The author does not confine patients to bed under such circumstances. Full expansion of the lungs should be invited by gentle exercise, short of fatigue and of exposure to the east winds and to wet and damp.

With a fibroid lung, all remedies must of necessity be palliative rather than curative. Tonics, suitable clothing, and good food, must be chiefly relied upon. With fair general health there is much less liability to bronchitic attacks. Acute attacks must be dealt with on the usual lines. With bronchorrhœa, inhalations of carbolic acid, creasote, iodine, and turpentine may be used with advantage, and the latter may be administered internally. Excessive coughing must be relieved by opiates and chloral, and indications of cardiac failure combatted by the usual remedies.

A paper on **The Course and Treatment of Certain Uræmic Symptoms.** is contributed by Dr. Beverley Robinson. Many attacks of indisposition, due to the excesses of the table, and which are put down in the broad category of bilious attacks, he regards as in reality cases of renal insufficiency. In many instances of obstinate nasal, naso-pharyngeal, laryngeal, and tracheal inflammation, chronic in type, he is firmly convinced that an inactive functional condition of the kidneys is the primary cause of these inflammations. In the evidently gouty cases, and particularly in those where the heart action is good and the tension in the arteries not excessive, colchicine is a more valuable remedy than nitro-glycerine. In instances on the contrary, in which the arterial tension is well marked or excessive and the heart laboring, whilst the quantity of urine is small and low in specific gravity, he believes that it is wise to begin the treatment with nitro-glycerin or the nitrites. In any very alarming expression of this condition, inhalations of nitrite of amyl should first be employed. The author is much opposed to the use of opiates, and especially of morphine hypodermically, in cases of chronic Bright's disease, except in very minute doses. He believes it is capable of doing much harm by locking up the secretions. In those cases however where the heart is the weak organ primarily, and where the kidneys will be greatly helped by cardiac stimulation of an active kind, he is not opposed to the use of morphia in small or moderate doses.

The other papers in this month's issue are: "Further Notes Respecting the Therapeutic Use of the Sheep's Thyroid," by Dr. James J. Putnam; "A case of Panophthalmitis, caused by the Bacillus Coli Communis," by Dr. Robert L. Randolph; and "A case of so-called Pseudomyxoma Peritonei with observations on the Formation of Hyalin," by Dr. Henry W. Bettmann.

PERISCOPE.

THERAPEUTICS.

Local Disinfection.

Chamberland and Tembach (*Am. de l'Inst. Pasteur*, June, 1893) have published the results of an important and extensive research on the above question. Their conclusions are as follows: 1. The Javel water of commerce (a 1 to 10 solution of chloride of lime) and commercial oxygenated water are ten times more active than a 1 to 1,000 solution of sublimate. These disinfectants either do not act, or they act very slowly, on moist microbes at the ordinary temperature, but at temperatures of 50 degrees and over, such microbes are destroyed in a few minutes. It must be borne in mind that whatever be the antiseptic used it is advantageous to allow it to act at the highest temperature possible in order to secure its full activity. 2. Dried microbes are much more resistant. While moist microbes are destroyed in a minute or so, when dried they resist disinfectants for many hours even at high temperatures. Moisture is therefore an important adjunct to disinfection. The authors have found that if dried germs be left in contact with water, and especially tepid water, for an hour, they are destroyed as rapidly as if they had not undergone desiccation. In the disinfection of walls, etc., they therefore advise a preliminary spraying of the objects with water before the use of the disinfectant proper. Another fact brought out by the authors is that a saturated solution of chloride of lime is much less active than one diluted with 10 to 20 times its volume of water. The disinfection experiments were carried out with the spores of anthrax and of aspergillus, with beer yeast and the bacillus typhosus. Other experiments made with thymol, essence of turpentine, and lysol gave results in no way so satisfactory as those with Javel water or oxygenated water (H_2O_2). The former is most satisfactory in that it is cheap, non-poisonous, and obtainable with the greatest ease.

Injections of Iodoform in Goitre.

Kapper (*Gaz. de Hop.*, September 2nd, 1893) uses a solution containing 1 part of iodoform and 7 parts each of ether and olive oil, which is injected into the goitre after previous disinfection of the skin. The trocar of the syringe is disinfected, and is then plunged to the depth of 2 to 3 centimetres into the tumor, and the patient is told to swallow in order to ascertain whether the cannula takes part in the movements of deglutition, or whether it has not been inserted deeply enough. Immediately the solution is injected the trocar is rapidly withdrawn and the orifice of the puncture closed by means of a piece of diachylon plaster. When the goitre is very large, he injects as much as 6 grammes of the solution at one sitting, in four different parts. The injections were repeated at intervals of four to six days, sometimes on several consecutive days. Local reaction was always feeble. Eight men and six women have undergone the treatment. After ten injections in the course of two months the circumference of the neck was diminished by 6 centimetres at least, and after another interval of two months there was a diminution of 8 or 10 centimetres. Besides this the discomforts felt by the patients were sensibly attenuated. Six months after cessation of the treatment the improvement was maintained.

MEDICINE

The Pathogenesis of Hepatic Abscess.

Zancarol (*Revue de Chirurgie*, August, 1893) states that he has proved by experiments on animals that dysentery and hepatic abscess are affections of the same nature, and that the pathogenetic factor of this complex organism is a micro-organism. A clinical experience of twenty-five years has convinced this author that the pus of a hepatic abscess is not less deleterious than that of other suppurating organs, and, also, that dysenteric and hepatic abscess are closely associated, so that, though one may not be the cause of the other, both affections are produced by the same toxic agent. In order to establish these conclusions on a scientific basis, Zancarol instituted a series of experiments on cats, the results of which show that both dysentery and abscess of the liver can be transmitted from man to these animals by injections of the pus and intestinal excretions, and that histologically the lesions in the human subject and those artificially produced in the animal are of a like nature. Hepatic abscess, it is asserted, has microscopic origin, the principal factor being the streptococcus. It remains to be settled by future inquiry whether other organisms apart from the streptococcus are capable of producing a similar morbid condition, or whether this organism is the spcial originating agent of the hepatic affection. Dysentery is regarded as an affection of the same nature as hepatic abscess, its pathogenetic agent being the streptococcus. As to the amœbæ which are so often met with in the fæcal discharges even of healthy individuals, these organisms, the author holds, play no part in the causation of dysentery and hepatic abscess. The streptococcus in most instances passes from the intestine to the liver either by the portal vein or the general circulation.—*Br. Med. Jour.*

* Calomel in Gout.

About fourteen years ago, Dr. F. Grimm (*Deutsche Medicinische Wochenschrift*, Nos. 15, 18, 1893), administered calomel to a patient who was suffering from a protracted attack of gout. The next day he remarked a material improvement and a retrogression of the symptoms. In the meantime he has tried the remedy, in about twenty cases of gout. In some cases the result was astonishing, for it acted like a specific while, in others, the immediate relief was followed by a slower recovery. He ascribes its action to the active peristalsis which results, for, in robust subjects an attack of gout is usually preceeded by sluggishness of the bowels. In such cases is the result the most favorable. The remedy must be so given that active peristalsis will result from the very first dose. One catharsis is generally sufficient to inaugurate the improvement and to continue it. Long treatment is not indicated. After the calomel a carminative may be prescribed. Besides calomel he has also used the yellow iodide of mercury which appears to act more energetically. His observations are confined to acute and subacute, articular gout and its immediate sequellæ. Relapses are not more frequent than after other methods of treatment.

* Ichthyol in Prostatitis.

Dr. Freudenberg (*Wiener medizinische Presse*, No. 30, 1893) has employed suppositories of ichthyol in the treatment of prostatitis, in 30–40 cases, mostly of the chronic form. In all cases he observed, in a short time, an improvement, and in the majority, a complete cure of the subjective disturbances as pain on defecation, sensation of pressure, on urination, as well as the objective symptoms, swelling or hardness of the gland. At the same time the condition of the patient's mind would improve and his general condition ameliorate. A parallel experience with suppositories of the iodide of potash demonstrated the superiority of the ichthyol. In the cases where necessary local treatment was applied to the urethra, it is of the greatest importance that the ichthyol be properly administered and that it be well distributed throughout the suppository or it will not act well. If used in the prepared hollow suppositories where the requisite quantity is poured into suppository, shortly after introduction, it will melt, the undiluted ichthyol be poured out onto the mucous membrane, and exert an irritant influence on the mucous membrane with pain and stool. He prescribes:

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*Translated for The Medical and Surgical Reporter by Frank H. Pritchard, M.D.

℞ Sulpho-ichthyolate of Ammonium, dgms.
3 6–75. (grs. xlv, ʒjss-ʒi¾).
Cacao Butter, ...gms. 2–2.5 (grs. xxx-xxxvij.)

Mix carefully No hollow ready made suppositories. One may begin with three decigrams, (5 grs.) for a suppository and increase to double that quantity. It is rarely necessary to exceed this dose. Two suppositories, per diem, are to be used, one in the morning, after stool, and the second, in the evening, before going to bed. A third is only to be introduced if a motion occur during the course of the day, otherwise it is not necessary as it was observed that the entire suppository was not absorbed for eleven to twelve hours.

* Gastric and other Nervous Symptoms of Neurasthenics.

Drs. Rummo and Braccini (*Semaine Medicale* No. 54, 1893), recommend the following pill, in the gastric and other nervous symptoms of neurasthenics:

℞ Phosphide of Zinc,... ....cgms. 10 (grs. jss).
Bromide of zinc,...........gm. 1. (grs. xv.)
Bromohydrate of Quinine, gms. 1.50 (grs xxijss.)
Extract of Nux Vomica,...gms. 15 c. (grs. ij.)

M. Thirty pills.
Three pills per diem.

Chloroform as a Tape Worm Remedy.

Dr. Stephen, (*La Semaine Medicale*, No. 54 1893) speaks highly of the value of chloroform in the treatment of tape-worm. With it he has succeeded in expelling worms where the usual tænicides failed him. He used the following, Thompson's formula:

Pure Chloroform, 4 gms.................... (ʒj).
Simple Syrup. 30 gms...................... (℥j).

To be taken in four doses, at seven, nine and eleven o'clock, in the morning, and, at one, in the afternoon. At noon the patient is to take an ounce of castor oil. It is well borne even in children.

* Sulphur in Chlorosis.

Prof. H. Schulz (*Deutsche Medicinische Wochenschrift*, No. 36, 1893) calls attention to the immense importance of sulphur in the human economy and recommends it in the treatment of chlorosis. In cases of pure chlorosis where iron is inactive the general condition is greatly improved by the administration of sulphur, and, after sulphur has been taken for some time, administration of iron could then be commenced. In cases of chlorosis with catarrhal inflammatory states of the digestive tract it is not well tolerated.

* To Prevent the Syncope of Chloroform.

Dr. Casasovici (*La Semaine Medicale*, No. 54, 1893) a Roumanian military surgeon prevents chloroformic syncope by cocainization of the nasal mucous membrane in those about to be chloroformized. This prevents reflex inhibition of the heart and respiration from irritation of the nasal mucous membrane from the vapor of the chloroform. In one patient who presented symptoms of grave collapse during amputation of a foot, after cocainization of the nasal mucous membrane, the other foot was removed, without accident.

* Iron Subcutaneously in Chlorosis.

Prof. Rummo (*Muenchener Medicinishe Wochenschrift*, No. 36, 1893) has experimented with various preparations of iron, etc., subcutaneously, in chlorosis, and finds the citrate of iron and ammonia to give the best results. The number of blood corpuscles and the amount of hemoglobine rapidly increased. The first symptoms of improvement were noticed after four to five injections, especially were the gastric symptoms and headache the first to disappear. The injections were made under all antiseptic precautions in the interscapular region and never caused either swelling, redness, nor was albuminuria ever observed. The improvement was lasting. In five days the spleen was enlarged.

* Auscultation in Fractures.

Dr. Vayana (*Medicinishe Neuigkeiten*, No 35, 1893) communicates a new method of recognizing a fracture. In such cases where the usual pathognomic signs of fracture are obscure one may apply a stethoscope to the place of fracture and have the bone at the same time percussed. A rough sound is heard which suddenly becomes weaker the moment that the point of fracture is passed. This simple sign is due to transmission of sound.

Antiseptic Treatment of Ozena.

The following treatment of ozena is recommended in the *Deutsche medicinische Wochenschrift*, No. 36, 1893): douche the nasal cavity, first, with a solution of carbolic acid. Then insufflate the following powder.

℞ Salol, 10 gms............................ (ʒijss).
Boric Acid, 5 gms.......................... (ʒj¼).
Salicylic Acid, 1 gm .... (grs. xv).
Powdered Talc. 20 gms................. ʒv).

Or the following powdered:

℞ Muriate of Cocaine, 1 dgm............. (grs, jss).
Menthol, 3 dgms .... (grs.v).
Boric Acid, 2 gms .... (grs. xxx
Finely powdered Coffee. 1 gm .... (xv).

A pinch several times a day.

New Reagent for Albumen in the Urine.

Dr. E. Spiegler has improved his formula for the testing for albumen in the urine. It consists of the following.

℞ Sublimate, 8 gms......................... (ʒij).
Tartaric Acid. 4 gms.................... (ʒj).
Distilled Water. 200 gms............... (℥vjss).
Pure Glycerine. 20 gms................. (℥v).

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* Translated for The Medical and Surgical Reporter by Frank H. Pritchard, M. D.

This preparation keeps easily and will respond to albumen in a solution of 1:350000. A few drops of concentrated acetic acid are added to the urine and the precipitate of mucine filtrated out, if necessary. Pour the reagent into a test-tube and let the urine run down the side of the obliquely held tube. A milk white ring will form at the point of contact. Peptones are not precipitated. If the urine contain iodine it will not respond for a cheesy yellow precipitate of the iodide of mercury is formed which may mask the albumen. It can not be confounded with albumen for it is different in color, and it is soluble in alcohol while albumen is not. As iodine is rapidly excreted it may be easily used by discontinuing the iodine, for a short time, when this very delicate test may be employed.

*Injections of Clycerine to Induce Premature Labor.

Dr. Edgar (*Wiener Medizinische Presse*, No. 37, 1893) has employed intra-uterine injections of glycerine in two cases to induce premature labor. He injected fifteen grams, ʒiv, between the membranes and the uterine wall. In one case contractions came on after two and a-half hours and in the other in thirty minutes. Of course antisepsis of the vagina is to precede, and it is better to bring the cervix down in order to be certain as to the introduction of the catheter. In the second case a Baine's dilator was placed into the cervix.

Ergotine and Gallic Acid in Hemopytysis.

Dr. Blaschko (*Deutsche Medicinische Wochenschrift*, No. 37, 1893) in cases of hemopytysis where injections of ergotine were of no service has often succeeded with the internal administration of gallic acid, in stopping the hemorrhage. Therefore, in recent years he has combined it with ergotine in copious pulmonary hemorrhages and with the best of results. He employed the following formula:

℞ Gallic Acid.................. 1 gm. (grs. xv).
Ergotine .... 1 gm. (grs. xv).
Distilled Water
Syrup of Orange Peel..... aa, 25 gms. (ʒvj).
A teaspoonful every two hours.

Where there was a great deal of irritation and inclination to cough he employed the syrup of opium instead of the orange peel syrup and in threatening cases he prescribed a teaspoonful every hour. As this remedy is entirely reliable he was able to dispense with the use of the ice-bag to the chest and injections of ergotine subcutaneously, which latter often lead to suppuration. Small pieces of ice were swallowed and cold milk ordered to be drunk with the greatest possible rest of body and especially of the organs of speech.

SURGERY.

The Value of the Hands and of the Fingers.

Surgeons have often to estimate the chances of saving injured hands, and the comparative values of hands and fingers. According to a scale of value furnished by the Miners' Unions and Miners' Accident Insurance Companies of Germany, the loss of both hands is valued at 100 per cent., or the whole ability to earn a living. Losing the right hand depreciates the value of an individual as a worker 70 or 80 per cent., while the loss of the left hand represents from 60 to 70 per cent. of the earnings of both hands. The thumb is reckoned to be worth from 20 to 30 per cent. of the earnings. The first finger of the right hand is valued at from 14 to 18 per cent., that of the left hand at from 8 to 13.5 per cent. The middle finger is worth from 10 to 16 per cent. The third finger stands least of all in value; although like other useless members of the community, it is surrounded by riches, its value is only from 7 to 9 per cent. The little finger is worth from 9 to 12 per cent. The difference in the percentages is occasioned by the difference in the trade, the first finger being, for instance, more valuable to a writer than to a digger.—*Med. News.*

Separation of the Lower Femoral Epiphysis.

Mayo Robson, after referring to the scant attention paid to this subject in the textbooks, gives cases to illustrate this condition. Extreme direct violence is usually the cause. The displacement depends on the direction of the violence, but also on the attachment or otherwise of the gastrocnemius tendon to the lower end of the upper fragment. The shortening, the projection of the lower end of the diaphysis in the popliteal space, the displacement of the epiphysis on the front of the femur, and the interference with the circulation, together with the cause of the injury and the age of the patient, form a group of symptoms pathognomonic of this fracture. Robson advises first reduction under an anæsthetic, which might be facilitated by division of the tendo Achillis: after reduction either the long splint with weight and pully or the double inclined plain might be employed. Should reduction be impossible, then excision might be practiced; but if the large vessels be ruptured or gangrene occur, amputation is the only resource.—*An. Surg.*

OBSTETRICS.

Intraperitoneal Ectopic Gestation.

Houzel (*Progres Medical*) relates a case where the pregnancy was, in his opinion, clearly peritoneal. For the last three months of its life the fœtus lived free amongst the intestines, without any investing capsule, anatomical or adventitious. It could even kick the liver, and caused great distress to the mother by disturbing the intestines. The pressure of the fœtal head set up severe pain in the left iliac fossa. The child passed meconium over the intestines. The placenta was firmly grafted on to the bowel. Nevertheless, in spite of the free fœtus and adherent placenta, the peritoneum was not inflamed. The child died at the end of the ninth month. The placental vessels were extremely large and continuous with others belonging to the intestine over the area where the placenta adhered. Houzel could not remove it, as immediate hemorrhage would have been unavoidable, and intestine does not contract like the uterus. As there was no sac, plugging was not attempted. He also feared to close the abdominal wound entirely, lest the peritoneum might prove less tolerant than before the operation. He preferred to leave the lower end of the wound open, to drain and to detach the placenta when it became evident that there was no fear of hemorrhage. The mother recoved.

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*Translated for THE MEDICAL AND SURGICAL REPORTER by Frank H. Pritchard, M.D.

GYNECOLOGY.

Testes in a Subject otherwise Female.

Kochenburger (*Keitschr. f. Geburtsh. u. Gynak.*, vol. xxvi, part 1, 1893, p. 73) publishes a case not absolutely unique out of high interest. The patient was 23 and had never menstruated. When 25 she observed slight "show" for a day, She had been married ten years, coitus was somewhat difficult, and she felt no desire. There was no vicarious menstruation. She was large in frame, but quite feminine in form; the breasts and mons veneris well-developed. The vagina formed a blind sac, 2 inches deep. The uterus was apparently represented by an elastic body of the size of a broad bean, lying rather to the right. An ovary-like body occupied each labium majus. The pair were intensely tender to the touch, and caused great pain. They were, therefore, removed. A vertical incision was made in each labium. The right gland was easily detached, the left lay higher up, and was difficult to dissect away from its connections. The two excised organs were carefully examined under the microscope, and the appearances, as represented in lithographs, are published with Kochenburger's paper. They contained tubuli seminiferi and not Graafian follicles, and were distinctly testicles. There were vessels arranged like the spermatic and distinct cremasters but no vasa deferentia. Possibly, Kochenburger suggests, they existed, but were cut too close for recognition, at the operation. He refers to similar cases related by Hicco, Breisky, and others. The monstrosity is classed as hermaphroditismus transversus virilis.—*Br. Med. Jour.*

Knots in the Umbilical Cord.

Lefour of Bordeaux (*Progres Medical*, July 8th, 1893) has made researches in this subject. A knot in the cord is very likely to kill the fœtus by offering a simple mechanical obstacle to the circulation; the umbilical vessels become plugged owing to changes in their coats. In one case, where the fœtal movements and heart sounds ceased twelve days before delivery, there was a tight knot in the middle of the cord. Arteritis and complete obstruction by organized clots were detected on examining the vessels at the affected point. Lefour experimented by injecting water at constant pressure into the umbilical vessels, and found that the knot does not markedly impede circulation unless there be compression as well. An amount of pressure which would hardly be dangerous in a cord free from knots is perilous when a knot exists. In the absence of compression a knot, even if tight, probably loosens itself under the increased pressure of the contractions of the fœtal heart.

Absence of Genitals; Vicarious Epistaxis.

Kochenburger (*Zeitschr. f. Geburtsch. u. Gynak.*, vol. xxvi, pt. 1, 1893, p. 72) examined last year a patient aged 16. She had never menstruated, but for three years had been subject to severe epistaxis every fourth week. She had been married a week, and coitus was found impossible. The patient was in general development, distinctly feminine, there was a little hair along the linea alba. The mammæ and mons veneris were well developed. There was a slight fold in the vestibule, which was very shallow; there was no fossa between the labia minora. The patient was put under chloroform, and no vagina could be detected. In its place lay a cord-like structure which ran upwards for an inch and a half, ending in a fold which ran transversely and clearly represented Muller's ducts; no trace of ovary could be found. Kussmaul stated over twenty years ago that evidence derived from examination of a living subject only is of no great value in these cases. Kochenburger insists, however, that since Kussmaul's days bimanual palpatation has been carried to such perfection that definite evidence can be obtained from the live subject. He feels sure that the ovaries were absent in his case, yet vicarious menstruation, in the form of epistaxis, occurred regularly. This contradicts Kussmaul's theory that menstruation, and even the molimen, is always absent when the vagina and uterus are undeveloped, though the ovaries may be present and contain follicles.—*Br. Med. Jour.*

ARMY AND NAVY.

U. S. ARMY, FROM OCTOBER, 1, 2893, TO OCTOBER, 7, 1893.

By direction of the Secretary of War, leave of absence for three months, is granted Captain William D. Crosby, Assistant Surgeon.

Majors Alfred A. Woodhull and Alfred C. Girard, Surgeons, are detailed as delegates to represent the Medical Department of the Army at the annual meeting of the American Public Health Association to be held at Chicago, Illinois, from the 9th to the 14th of October, 1893.

Norman Seaton, Asst. Surgeon. To proceed to New York, N. Y., for temporary duty, August 18, 1893. To proceed to Jersey City, N. J. for temporary duty, September 3, 1893. To rejoin station September 9, 1893.

Sprague, E. K., Asst. Surg. To proceed to Cairo, Ill. for temporary duty, Aug. 26, 1893.

THE

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ORIGINAL ARTICLES.

MEDICAL TREATMENT OF INEBRIETY.*

T. D. CROTHERS, M. D.†

The medical treatment of inebriety appears first in pictorial representations found in the ancient tombs of Egypt.

Here can be seen the states of stupor, nausea, vomiting, administration of drugs, showering by water, massage, flagellation and attempts to counteract the narcotism by external stimulation, also innunctions of the body, convalescence, and restoration, all faithfully outlined on these old tombs whose origin is lost in antiquity.

Fragmentary records of early Greek physicians contain references to the treatment of excessive wine drinkers.

The great philosopher and physician, Hippocrates, clearly recognized the disease of inebriety and left some very sensible rules of treatment.

From time to time, for the past twenty centuries, the question of the disease of inebriety and its treatment has come into prominence at intervals, then died away. Finally, at the close of the last century and the beginning of this, Dr. Rush of this country and several eminent European physicians affirmed the fact of disease, and laid down lines of treatment. But it was not until 1864 that the scientific treatment of inebriety became a practical reality, in the asylum at Binghamton, N. Y. From this time the rational study and treatment of inebriety begins.

Unlike other great medical topics, public sentiment has gone on in advance of scientific knowledge of this subject in its demands for means of treatment that shall control and cure the victim. In meantime, all rational study and treatment of inebriety has been obstructed by false theories and delusive misconceptions, that cling tenaciously as fogbanks along the shore.

Notwithstanding all the evidence, based on facts and experience, against the present methods of treatment, they still continue.

Temperance revivalists still boast of the number of pledged and converted as cured. As an evolution from this comes the empiric, with his secret specifics, boasting to have first affirmed the theory of disease, and claiming equally astonishing results with unknown drugs.

While the question of disease and treatment is passing through the period of renaissance, there are landmarks and clearly defined facts to guide all future studies.

Some of these outline facts grouped may help to clear away the errors that cloud the present conception of this subject.

The disease of inebriety, like other diseases of the brain and nervous system, follows a uniform movement, controlled by laws of dissolution, and conditions and causes that can be determined.

In the question of treatment, the first inquiry is, What is the present condition, the organic and functional derangements of the brain and nervous system, also nutrition and digestion?

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† Superintendent Walnut Lodge Hospital, Hartford, Conn.

*Read before the Mississippi Valley Medical Association, October 5, 1893.

Second: What are the special effects of alcohol on the nerves and brain?

Third: Is the use of spirits a symptom of other brain states? or is it an active factor in the causation?

Fourth: What neurosis and conditions of heredity are the active and latest factors in the history of the case?

From a study of these questions the lines of rational treatment will appear. Take a common case as an illustration. You are called to a case of gastritis. The man has drunk spirits for a long time and taken but little food; both digestion and nutrition are seriously impaired. Alcohol has affected the sensory and motor nerves, it has made the brain unstable, and lessened power of control, with evident hyperæmia. If the treatment is based on these symptoms alone but little can be expected. If we go back and find that the use of spirits began after some severe strain or state of exhaustion, or following as an entailment of some disease or traumatism, either physical or psychical, or originated in contagious surroundings and faulty conditions of living, new lines of treatment are indicated. If further inquiry shows a neurotic inheritance, direct as from alcoholic ancestors, or indirect as from insane,consumptive, epileptic,or any other neurosis, new indications appear.

The treatment of a case which checks the brain and nerve irritation by narcotics and, by the withdrawal of spirits and the use of eliminatives relieves the functional disturbances, is only partial. If at this period the pledge or conversion fills the mind by auto-suggestion with confidence that cure has taken place, or if the system is kept saturated with narcotics until the dominant idea of cure prevails or the mind is buoyed up on the delusive hope of final and permanent cure, the results are accidental and uncertain. Should final restoration follow the use of these means, the real causes of cure are unknown and belong to the realm of psychotherapeutics. Cases which recover after these psychical remedies are those in which the drink craze or symptom dies out or becomes exhausted, through the operation of inherent forces, and not by the last means or remedies used.

The medical treatment of inebriety must depend on the causes and conditions of the case. Without this knowledge all remedies are empirical. From such a clinical knowledge the physician may point out the lines from which a return to health may be expected. He can foresee the oncoming insanity of which the drink impulse is a clear symptom; or the paresis with this stage of exaltation and spirit excess; the acute delirium, the melancholia, the masked epilepsy in the dipsomaniac, and many other conditions that can be anticipated and studied. Many of these cases, in which to a superficial observer only the drink symptom is prominent, are found to have a uniform line of progress and termination. Take a hundred cases of inebriety and from a careful study of heredity, present condition, and the action of alcohol, etc., etc., a prognosis can be made that will be verified in ninety per cent. of all cases. The first question to be determined in a given case is the physical condition of the patient. As a rule all inebriates suffer from degrees of paralysis, both vaso-motor, sensory, and functional. Sub-acute inflammations and reflex irritations are common. The heart's action is variable, and the organ is enlarged. The liver is also enlarged and frequently the seat of low grade of inflammation. The stomach also suffers from both organic and functional derangements. Neurites are very common and of all degrees, usually called alcoholic rheumatisms and neuralgias. These are only the most general and prominent symptoms and call for general eliminative treatment. There is present in all these cases defective elimination of waste matter, also chemical changes of both cell and tissue, due in part to the direct action of alcohol and its indirect action on the nervous mechanism. As a result ptomaine poisonings, new soils for the growth of bacteria, also new centers of congestion and irritations occur. The bath corrects these indications by stimulating the cutaneous surface. Hot air baths or hot water baths, with rubbing once or twice a day, are the first essentials in treatment. Following this should be given what is termed internal lavage, or washing based on the same principle. This is best secured by saline and mercurial cathartics, with copious draughts of warm or acid waters. The patient should be placed in conditions where a certain amount of control over his habits and conduct can be obtained. Either at home, under the charge of a trusted nurse, or in an institution where all the surroundings can be guarded.

All spirits should be removed at once, and a careful watch of the case be maintained to ascertain any organic or other diseases which may be masked by the use of spirits. Epilepsy, tuberculosis, paresis, hysteria, and other affections often come into great prominence when spirits are abandoned. The remedies most valuable following the removal of spirits and baths are the cinchonia bark infusions, nux-vomica preparations, together with the bromides, codeia, sulfonal, and other narcotics for the control of the nervous irritations. Strychnia is inferior to nux-vomica in my practice. Choral is unsafe and uncertain in many cases. All narcotics should be given in large doses for a short time and changed frequently and discontinued. Beef tea, hot milk, hot acid drinks, are often very effectual as narcotics, allaying nervous irritation. Rest and frequent massage with the baths, mild tonics, salines, and good foods are often all the means essential for restoration. In many cases the drink craze disappears from the use of these means alone. In a certain number of cases the origin of the drink symptoms is associated with syphilis and bad living, or the advent of syphilis has been followed by excessive use of spirits. In these cases mercury, arsenic, and the iodides should enter very prominently into the treatment. In a certain number of cases unusual states of stupor and delirium follow each other with explosive violence, unusual to ordinary alcoholic intoxication. A suspicion of specific poison followed by mercurial treatment gives the strongest confirmatory evidence in the good results from such means.

When inebriety is traceable to head injuries, from blows, heat, shocks, sudden emotional strains, etc., etc., sub-acute inflammation and degenerative cell and functional changes present are noted in the impulsive exhaustive drink symptoms. Both the prognosis and treatment should anticipate grave brain troubles.

Direct heredity, noted by inebriate ancestors, demands in the treatment total change of life and long periods of brain and nerve rest. Where the heredity is indirect, coming from allied states of brain degeneration, such as insane, idiotic, criminal, pauper, epileptic, and other profound brain diseases, the medication should be directed to lessen and favor return to states of health. In some of these cases the action of spirits varies widely. The insanity of the drink symptoms and the organic degeneration is so pronounced as to suggest various causes. These are the cases which become drug-takers of all kinds, and the cure or subsidencr of one drug addiction is followed by another. These are the cases which appear in every community as shining examples of cure by "gold specifics," by prayer and pledge, and who very often secretly use opium or other narcotic drugs.

The hysterical confidence in permanent cure by unknown measures in a brief time is always open to grave suspicion of hysterical credulity or duplicity.

In neurotic cases where alcohol is quickly followed by intoxication, especially in young persons, a grave prognosis is present. The treatment should be a radical change of life and also include all the constitutional remedies found valuable, such as baths, tonics, foods, and mineral drugs.

In cases where cell and brain exhaustion from imperfect rest and food are present, the treatment must be nutrient and hygienic, rather than by drugs. Dyspepsia and the various disturbances of the stomach and liver, which are relieved by spirits concealed in bitters, are always grave troubles. Faulty or no mental control and unstable brain equilibrium, with its irregularities and exhaustion in inebriety require long persistent treatment. Many of these neurotic cases are benefited by mental treatment. There is a realm of psycho-therapeutics in which the medical man can foster dominant ideas and direct the activities of the brain along hygienic lines of living. Hypnotism has been tried in this way with indifferent success, so far. New surroundings, with change of thought and impulse, have been very patent in some cases. A primary condition in all these cases is exhaustion of the central brain structure. In most cases full restoration never occurs. The drink craze dies out, but the weakness and lowered vitality remain. In periodic cases the explosive character of the brain energy accumulating and discharging at intervals suggests a line of treatment which will afford an outlet for this abnormality. In some cases restraint by drugs at the period of discharge is valuable ; in others baths, exercise, cathartics seem to divert the energies and relieve the paroxysm. In one case a prolonged hot air bath, with severe massage, avails ; in another, a long tramp in the country, with dog and gun, and severe exercise ; in another, cessation of all work and rest in bed, assisted with bromides ; another case abstains from food at this period, and in other cases eats to excess for two or three days, and thus avoids the paroxysm.

Various measures to control the drink paroxysm in these cases will depend on a study of the case. The premonitory symptoms are often very clear, and means of prevention can be provided. Where the case is in an asylum the application of means are more positive, but when the case is not under control greater skill is required. Many of these periodic cases drink only on holidays, or days of general rejoicing. If they can be carried over these periods they remain sober until similar occasions recur again. For many years I treated a case who never drank except during the holidays. A week before the approach of this season he was given mineral waters, nux-vomica, bromides at night, severe exercise and hot baths, with sharp rubbing, every day. This was continued for two or three weeks, then discontinued, and the drink craze was averted. In one case a man never drank except when on the seacoast; change of residence to the mountains was followed by perfect abstinence. States of contagion are very patent causes in some cases, and when recognized can be remedied. A form of hypnotic influence prevails, in which men drink to excess in certain surroundings and in certain company, and abstain where conditions are removed. Asylum care and study reveal many very curious facts along this line. Often pronounced cures follow from a careful study and recognition of these symptoms. The tendency to epilepsy, suicide, dementia, and other grave diseases should always be considered in such cases, and both local and constitutional remedies be persistently applied.

The continuous drinker, either in moderation or excess, has always the strong possibility of paresis, dementia, and cerebral hemorrhage before him. The continuous action of spirits is that of a paralyzant, disturbing and breaking up all the chemical and vital processes, either slowly or rapidly. The condition to be treated, after the removal of the active or apparent causes, is that of brain anæmia and profound central exhaustion, and degeneration of all the vital processes.

Institutional care and treatment of these cases are obviously the most important and practical. In the near future, when the disease of these cases is recognized, their early treatment at home by the family physician may be practical. His knowledge of the family history and surroundings will enable him to apply preventive means and measures that are impractical later on.

Public sentiment permits these cases to grow up in every community under the impression that all excess of spirits is simply moral weakness, within control of the victim. Thus, the period of curability is passed, and only when the disease and insanity of the victim is unmistakable are rational means applied. In an experience of seventeen years in asylums for these cases, I have rarely seen recent cases of inebriety coming for treatment. As a rule, all persons admitted to asylums are those who have exhausted every other means for relief, and who have used spirits until both the brain and organism are obviously diseased. To expect cure or permanent restoration in a few weeks from any form of treatment in such cases is impossible, or cure even from long medical care in any very large number of cases cannot be reasonably expected. Yet, the most reliable statistics show that fully thirty per cent. are restored from institutional medical care extending over ten or twelve months. I am sustained by the best authorities in asserting that the inebriate is more curable than the insane, but the treatment must be based on his actual condition and extend over a long period of time, and be founded on general principles of rest and organic restoration.

The restraint and care of an asylum is of more value for its control of the surroundings, and the facility for the application of exact methods of treatment, than for its removal and restraint from alcohol. Rest and building up of brain and nerve tissue takes away the demand for alcohol more positively than locks and barred doors.

The central object of all treatment is to remove the causes which demand spirits for relief. To silence this craze for alcohol is not curative any more than the narcotism of opium removes the cause of pain.

While the use of alcohol will create general organic degeneration, the demand for its use is always symptomatic of grave central irritations and lesions.

Locks and bars, pledges, chemical restraint by drugs, appeals to diseased higher brain sections, appeals to the credulity and disordered senses and emotions by "gold cures," or specifics, are all empirical. Yet, excepting imprisonment in jail, all these measures claim to be curative, and refer to examples whose conditions can be explained by other and more rational causes. The drink symptom is in many cases self limited and will change and disappear as a natural dissolution process, sometimes merging into organic disease of the stomach, heart, liver, kidneys, nerves, and brain. Cerebral hemorrhages, organic diseases of the lungs, kidneys, and nerves are very common entailments following the excessive use of spirits. The examples of cure by specifics or moral means are as a rule diseased, and the change of the drink symptom is followed by other concealed or pronounced organic lesions. The breaking up of the drink craze by narcotics and other powerful drugs will of necessity increase the degeneration, and directly predispose to insanity.

Another central object of all treatment is to restore the organism so that the narcotic effect of alcohol or other drugs will not be demanded. This is a brief outline of some of the more prominent facts in the treatment of inebriety. It will be evident that we have scarcely touched the subject. Only in the most general way have the real facts and principles of treatment been recognized. The noise and confusion of empirics and specific vaunters are only foam bubbles on the surface, whose only significance is the agitation and movement that presages the oncoming truth. No question of practical medicine appeals more strongly to physicians in every community for solution. What shall we do with the inebriates is answered to-day by quacks, pietists, politicians, and reformed inebriates. The mystery, credulity, and dogmatism of their answers is "confusion worse confounded."

From scientific studies by medical men the correct answer must come. They are the real teachers of the nature and treatment of inebriety, and yet to-day nearly half a million politicians, empirics, reformers, clergy, temperance men, and reformed inebriates are talking, writing, and teaching what inebriety is and how to cure it, and not a single score of physicians in this country have given the subject any study. What a startling reflection this is on medical science and medical men. Some of the facts which may be considered as starting points in the study and treatment may be outlined as follows:

The treatment of inebriety extends far back to antiquity. Public sentiment is to-day far in advance of any real knowledge of the nature and treatment of inebriety; hence, the armies of specific vaunters and temperance revivalists who claim such remarkable results. The disease of inebriety, like all other diseases, follows a uniform line of events, from certain special causes and conditions. Its treatment must begin from a knowledge of the present condition of the case and the effects of alcohol on the system; how far the use of alcohol is the symptom of other diseases and what heredity and neurosis enter into the case. A study of these and other conditions point out the lines of rational treatment.

The prognosis and treatment depend altogether on a clear apprehension of the case. The first thing is to place the patient in the most favorable conditions for cure, where all the surroundings can be helpful, and the best means applied to build up and restore his brain and nervous system. This may be done in an institution or at home under the care of a nurse.

The withdrawal of spirits and the use of baths and massage daily, with brain rest, are essential. Remedies such as the bitter tonics, mineral salts and acids, nux-vomica, and often the bromides and the iodides are valuable. The use of nutrients, with rest and baths, fulfill most all the demands of each case. Reconstruction of cell and tissue is the object to be sought.

Specific poisons such as syphilis, or injuries to the head, starvation, and other conditions require special lines of medication. Heredity and all its allied neuroses are constitutional states of degeneration, to be treated on general principles; change of living and surroundings, with appropriate medication to build up the entire organism, must be applied in all cases.

Restraint, protection, liberty, and the application of means to meet all the demands and abnormalties must be applied.

The public treatment of the pauper inebriates must be in military hospitals, especially organized for this class. The treatment for those able to pay can be more completely carried out in special hospitals, which will combine all the best appliances of science to meet the wants of each one.

The entire subject must be studied from a higher level, and along the line of accurately observed facts.

NO MISTAKE IN THE PULSE.—Dr. B— of Virginia is a very able man in two branches of human endeavor. He is famed as a physician, and as a consumer of wines at dinner he is probably not anywhere excelled. Because of the latter distinction he is rarely called upon professionally after dinner by those who know him. It happened not long ago, however, that the sudden illness of the wife of one of his friends made it necessary that he should be summoned in a professional capacity late in the evening. The doctor came, visited the patient, and prescribed.

As he was about to leave the house the sick woman's husband asked what the exact trouble was. The doctor put on a long face, and seemed unwilling to gratify the husband's curiosity; but finally, after much insistence upon the latter's part, he observed, gravely, that the lady had been indulging in too much strong drink but that he had prescribed, and that the ill effect would soon pass away.

The revelation astounded the husband, and he expressed some doubt as to the accuracy of Dr. B—'s diagnosis.

"I am not mistaken at all," he replied, indignantly. "I have had much experience in cases of this sort, and cannot be mistaken. The pulse is an absolutely accurate indicator. Mrs. S—'s pulse at this moment is the pulse of the inebriate." With this he left the house, not at all pleased that Mr.—S should have chosen to doubt his judgment.

Mr. S—immediately repaired to the sick room, and was still further disturbed on entering to find his wife in a most hilarious state of mind, laughing so heartily, in fact, that he was almost of the opinion that Dr. B—was right after all. Upon inquiring of madam as to the cause of her mirth, he was informed that Dr. B—had sat at her bedside, looked at her tongue, and requested to feel her pulse. She had held out her hand, but the doctor had not taken it all, but had contented himself with placing the fingers of his right hand upon his own left wrist.

In short, the doctor had felt his own pulse.—*Harper's New Monthly Mag.*

THREE GOOD STROKES.—An eminent New York divine, in the course of an address at a fraternity dinner recently, told this story. Said he: "I met a Brooklyn friend of mine a few days ago, and as he appeared to be feeling in an unusually exuberant frame of mind, I asked him why. He replied that he was happy because he had done three good actions the day before. He had met a poor woman on the street. The woman held a sickly-looking child in her arms, and she was weeping. Inquiry showed that she was weeping because she was convinced that her child was dying, and unbaptized.

"But,' said the Brooklyn man, 'why do you not have the child baptized?'

"'Because I have no money, and the fee for baptism is one dollar,' said the woman.

"Whereupon the good Samaritan handed the woman a ten-dollar bill, gave his address so that she could bring back the change—which she did return—and went his way.

"That is one good action,' said the Doctor. 'Now for the other two.'

"'Oh,' observed the Brooklyn man, 'they are all three in that one. First, I relieved the sorrows of a weeping woman; second the child of eternal salvation; and third—' Here he hesitated.

"'Yes?' said the Doctor. 'What was the third?'

"'Well,' said the Brooklyn man, 'the third was that I got rid of that vile counterfeit ten-dollar bill I had been carrying for more than a year.'"—*Harper's Magazine.*

COMMUNICATIONS.

ETIOLOGY AND PREVENTION OF DEAFNESS.*

GEO. F. KEIPER, A. M., M. D., LAFAYETTE, IND.

The writer submits herewith a table dealing with the reputed causes of the deafness of the pupils of deaf schools of nineteen states. This includes all pupils ever taught by these schools, excluding those for whose deafness no cause is assigned. The reports furnished are not scientifically correct. Some causes are recorded which are absurd. Effort has been made to eliminate these so far as possible. It is well nigh impossible to eliminate all. Until state institutions employ competent aurists so that the pupils may be properly examined, and until the reports of competent physicians can be obtained in preference to parent's, uncertainty will prevail, valuable information will be lost and hopes of prevention, based upon it, blasted. However, we hope to draw some lessons which we trust will stimulate further thought and investigation.

Our table deals with 9,897 cases; of these 3,559 were congenital in origin and from this we proceed to divide our list of causes into

I, Congenital,
II, Adventitious.
(*a*) Predisposing—
1, Age
2, Inflammations of upper air passages.
(*b*) Exciting—
1, Scarlet fever
2, Meningitis
3, Measles
4, Mumps
5, Catarrh
6, Typhoid fever
7, Scrofula
8, All others mentioned in table.

I, Congenital deafness is a fruitful source of study and investigation relative to its prevention. It is believed by many to be due to—

(*a*) Cousins intermarrying
(*b*) Persons congenitally deaf intermarrying.—This is on the same principle followed by breeders in securing peculiarities in stock.
(*c*) Relatives of deaf mutes marrying.

Therefore—

(*a*) Cousins should not marry.
(*b*) Persons congenitally deaf should not marry. Some fear a race of deaf mutes thus.
(*c*) Relatives of deaf mutes should not marry.

If a proper examination of these congenital cases were made the great probability is that they would, in a great measure, find their origin in *adventitious* causes which we now consider briefly:

II, Adventitious causes are either
(*a*) Predisposing, or
(*b*) Exciting.
(*a*) The predisposing causes are
1, Age
2, Inflammation of the upper air passages.

1, Age:—Deafness in the main originated in childhood. As far as possible the ages at which the children became deaf was ascertained.

AGES AT WHICH DEAFNESS OCCURRED (CONGENITAL EXCLUDED) (GEO. F. KEIPER.)

STATE.	Under 1	Under 2	Under 3	Under 4	Under 5	Under 6	Under 7	Under 8	Under 9	Under 10	Under 11	Under 12	Under 13	Under 14	Under 15	Under 16	Under 17	Under 18	Under 19	Under 20	Under 21	Indefinite
Texas	42	30	14	7	6	4	1	4			1	3	1									110
Illinois	297	429	131	81	60	33	38	18	11	16	14	3	10	9	1	1	1			1		
Minnesota	109	95	54	42	21	25	16	9	7	7	10											21
Kentucky	76	80	52	30	20	11	9	6	7	6	1	4	3	1	1			1				
Maryland	31	35	35	25	23	7	10	6	3	1	1	2	3	1								21
Colorodo	26	19	11	7	5		2	2	2	1	2											8
Indiana	155	219	158	101	85	70	49	38	25	21	10	10	11	5	2	6	3	1	1			232
N. Dakota	5	1	1	3		1																3
Michigan	5	17	17	7	7	7	4															
Ontario	92	112	97	56	34	25	13	10	3	9	5	2	2	4	2							107
Wisconsin		7	5		2		1	2		2												
Kansas	69		103	49	40	23	16	6	7	2	6	5	2					1				44
Missouri	191		139	81	60	38	38	18	4	4		4			4							222
Pennsylcania	3		8			9			9													
Mississippi	12	9	5	6	3	1	2			1								1				117
Totals	1113	1053	730	495	366	254	199	119	78	70	50	33	32	20	10	7	4	4	1	1		88

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*Read before the Miss. Valley Medical Association, Oct. 6, 1893.

Alleged Causation of Deafness by State Institutions for Education of the Deaf. Collated by George F. Keiper, A. M., M. D.

STATES.	Number	Congenital	Indefinite	Scarlet Fever	Cerebro-Spinal Meningitis	Brain Fever	Spinal Fever	Gathering in Head	Measles	Catarrh	Accident	Typhoid	Brain Inflammation	Whooping Cough	Spasms	Scrofula	Pneumonia	Diphtheria	Quinine and Medicine	Hydrocephalus	Congestion of Brain	Malaria	Teething	Mumps	Inflammation of Ear	Congestive Chill	Paralysis	Typhus	Spotted Fever	Cholera Infantum	Spinal Congestion
Illinois	1280	588	155	155	333	110	5	55	54	53	52	56	28	24	21	11	15	16	15	12	13	10	7	8	10	7	4	1	....	4	2
W. Virginia	98	53	21	5	1	4	....	....	3	1	1	....	....	1	....	1	....	2	....	....	2	....	....	....	1	....	....	....	....	....	....
Minnesota	586	170	41	89	67	59	....	....	20	17	11	24	6	6	9	3	5	5	....	4	....	2	4	1	1	....	5	....	....	....	....
Kentucky	681	324	90	64	....	68	....	50	12	18	13	9	1	13	9	9	6	2	7	5	....	5	....	1	1	2	2	....	11	1	...
Maryland	352	150	32	61	13	19	....	6	4	3	13	11	....	5	6	....	3	3	2	5	....	1	....	....	2	....	1	....	....	1	....
Ohio	430	120	79	39	....	35	38	20	21	21	4	6	1	6	5	4	3	1	3	2	....	5	....	2	....	....	3	....	4	1	....
Colorado	117	26	19	13	13	6	....	6	5	11	3	2	....	4	....	....	....	4	....	....	....	....	3	....	....	....	....	....	....	....	....
Indiana	1800	593	202	148	....	116	348	....	45	41	30	35	75	19	18	20	7	8	2	10	5	....	2	14	....	15	....	....	....	1	..
N. Dakota	15	1	[illegible]	....	....	1	....	....	1	8	1	....	....	1	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	3
Michigan	343	83	37	31	20	18	56	....	9	12	8	....	2	5	....	....	....	1	1	....	....	1	....	2	....	1	8	16	....	2	1
Iowa	370	75	70	26	....	27	93	12	4	3	20	....	....	1	2	1	7	4	2	....	....	2	1	2	....	....	..	5	10	1	....
Ontario	943	368	174	67	22	24	47	9	27	40	34	9	9	10	8	....	6	3	....	7	7	3	14	5	12	....	1	5	....	....	19
Wisconsin	44	22	....	9	5	2	....	1	....	....	....	....	....	1	....	....	....	2	....	....	....	....	....	....	....	....	1	1	....	....	....
Kansas	668	206	80	47	112	43	....	30	21	7	17	17	....	10	6	4	7	6	4	3	....	....	2	2	....	6	1	....	....	4	....
Missouri	1232	418	289	51	192	57	4	36	25	11	27	26	10	13	12	10	5	7	11	....	4	10	4	3	....	....	2	....	....	8	....
Pennsylvania	63	34	....	10	....	6	....	....	....	1	2	3	....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	5	....	....
Mississippi	266	107	91	12	10	7	....	11	1	....	....	8	....	1	1	1	....	....	4	....	1	....	....	....	1	....	1	....	....	....	....
Nebraska	374	118	58	36	48	25	....	11	7	....	6	15	4	10	2	6	5	1	....	1	....	2	....	....	6	1	2	....	....	4	....
Texas	235	103	43	2	2	15	....	14	9	6	3	4	....	2	1	2	1	2	....	....	2	3	2	1	1	....	2	....	...	1	....
Total	9897	3559	1489	858	838	642	591	271	268	253	235	225	136	132	100	72	67	65	61	41	34	47	41	41	36	32	32	28	30	28	25

ALLEGED CAUSATION OF DEAFNESS BY STATE INSTITUTIONS FOR EDUCATION OF THE DEAF.
COLLATED BY GEORGE F. KEIPER, A. M., M. D. (CONTINUED).

STATES.	LaGrippe	Erysipelas	Sores in Head	Nervous Fever	Bilious Fever	Throat Trouble	Croup	Small Pox	Winter Fever	Disease of Ear	Bronchitis	Worm Fever	Scald Head	Sore Mouth	Chicken Pox	Rheumatism	Cholera	Shingles	Inflammation of Bowels	Concussion of Brain	Swelling in Head	Appoplexy	Hemorrhage	Vomiting	Jaundice	Kidney Disease	Collection in Ear	Cancer	Exposure	Fright	Tubercular Meningitis	Malpractice	Eczema	Sore Eyes	Diabetes	Hives	B ls
Illinois	5	4	....	6	9	....	....	2	8	9	3	1	1	4	1	....	1	1	1	1	1	1	1	1	1	1	1	1	....	....	....	....	....	....	....	....	....
W. Virginia	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Minnesota	3	....	18	10	....	....	....	2	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Kentucky	....	3	1	....	1	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....
Maryland	4	....	....	....	....	1	2	2	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Ohio	....	1	....	....	....	1	3	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....
Colorado	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Indiana	2	6	....	....	....	2	2	2	....	....	1	....	....	2	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	1
N. Dakota	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Michigan	....	1	....	....	2	....	4	....	1	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Iowa	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ontario	....	....	....	....	4	....	....	....	....	....	1	4	4	1	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wisconsin	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Kansas	2	2	....	....	....	1	1	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Missouri	....	1	....	....	....	2	1	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pennsylvania	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mississippi	1	1	....	....	....	3	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nebraska	2	1	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Texas	3	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals	22	21	19	16	16	13	13	10	9	9	8	8	6	7	4	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

The table shows that out of 5,514 cases, 4,011 became deaf before the age of 6 years.

[See tables on pages 630 and 631.]

2, Inflammations of the nose, pharynx, naso-pharynx and tonsils constitute, in the practice of aurists, the most frequent causes of deafness, our table to the contrary notwithstanding. From it we find catarrh and throat trouble to cause 266 cases or 2.7 per cent. This percentage is too low as all reputable aurists will readily admit.

In 1867, Drs. Roosa and Beard examined 296 cases of whom 200 has chronic pharyngitis and tonsillitis or nearly 68 per cent. It is indeed marvellous that owing to the remarkable prevalence of catarrhal troubles of the upper air passages, we do not have more deafness. I believe we may safely say that 70 per cent. of deafness among so-called deaf mutes may be directly attributed to diseases of the upper air passages and if they have received an amount of attention equal to that bestowed upon the diseases reputed to have caused the deafness, much trouble would be saved these unfortunates and some expense, the state.

Though the table be inaccurate yet when we take a summary of the deafness caused by the

(*b*) Exciting Causes
1, Scarlet fever
2, Cerebro-spinal meningitis
3, Measles
4, Mumps
5, Catarrh
6, Typhoid fever
7, Scrofula (syphilis?)
8, LaGrippe and
9, Throat troubles,

we may reason with some certainty.

These causes produced 2,393 cases or 24 per cent. Without the predisposing cause of inflammation of the upper air passages these exciting causes in a great measure would have been inefficient.

Some for argument's sake may say that these diseases produced trouble of the internal ear direct, without the intervention of catarrhal troubles to cause middle ear trouble. I reproduce from Dr. Spencer's article in the *Reference Handbook of the Medical Sciences,* a table comprising 4,102 cases upon this point.

Reporter	No. of cases	Exter. Ear	Mid. Ear	Inter. Ear.
Blake	1652	466	1128	58
Burnett	1187	279	868	40
Spencer	1263	243	978	42
Totals	4102	988	2974	140

The proportion of internal ear trouble is so small as not to require much consideration. Moreover the middle ear trouble may cause internal ear trouble.

Wines in making a compilation from the census of 1880 relative to deafness, finds out of 9206 cases, 4551 due to scarlet fever and meningitis alone.* In the table submitted we may regard errors present because the number assigned to scarlet fever and meningitis is too small.

PREVENTION.

The prevention of deafness demands first of all a removal of all predisposing causes. We have hinted at this partially in the previous discussion.

Concerning congenital deafness, if what has been asserted is true then the rules concerning marriage should be observed, legally, if not otherwise.

Catarrhal conditions of the upper air passages must be early relieved. In the main this requires surgical treatment, upon which a book might be written. However the principal causes to be removed are adeniod vegetations in the vault of the pharynx, and hypertrophic rhinitis and enlarged tonsils.

We have seen that the great majority of of the instructed contracted deafness before the age of six years. This excludes congenital cases. Whatever is to be done successfully must be done before the age of six years. Very much of the effort we put forth on these cases after the age of six is fruitless. Could aurists at the right time, put forth one fourth the effort they are called upon to do at an improper time, there would be better satisfaction on the part of physician and patient. There is nothing more unsatisfactory than treating an old case of deafness not due to necrosis of the ossicles. Chronic diseases mean inflammatory new tissue formation, which wherever it occurs is very difficult of removal.

A discussion of prevention so far as exciting causes are concerned would consume more time than would be justifiable. The watch word is prophyllaxis towards the infectious and contagious diseases. Of their skillful treatment you are all aware. Beware that the accompanying ear complications receive due notice and treatment.

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*Ref. Hand-Book Med. Sci.

GALL-STONE COMPLICATED BY GASTRIC ULCER; AUTOPSY.

W. HENRY PRICE.

During the past summer while associated with Dr Phillip Marvel, of Atlantic City, a very interesting case presented itself, in which the differential diagnosis between gall-stones and hepatic cancer was rather more difficult than usual because of certain symptoms being absent, and on account of the patient having recently had his life insured, the autopsy involved more than a mere medical interest.

The history of the case is as follows: Benj. M., a colored man, fifty-one years of age employed in the Penna. R. R. yards, had been feeling badly for two months or more, and growing steadily worse, he called me in to see him on July 18, 1893.

By reason of the patient's ignorance accurate statements were difficult to obtain, but so far as the family history was concerned nothing could be elicited which bore upon the diagnosis of the case in question.

In regard to the previous history of the patient, he had enjoyed good health until about two months before my first visit, and had been doing hard work. He was temperate in all his habits.

His first symptoms of disturbed health were anorexia, general malaise and sense of great weakness. Then he became cognizant of a dull *constant* pain with tenderness in the region of the liver, and soon after he noticed that his stools were white, while the urine was black, as he expressed it. He however, kept at work and did not call in any regular physician, but contented himself by taking various patent medicines, now and then paying a single visit to first one doctor and then another, without diagnosis or relief.

Finally he became so weak that he was forced to take to his bed. At my first visit I found the conjunctiva and mucous membrane of the mouth deeply bile-stained, stools almost white and urine loaded with bile. He had lost flesh and strength progressively, and a physical examination revealed marked tenderness over the whole liver, although the organ was apparently not enlarged and no nodules could be felt.

The diagnosis of obstructive jaundice was made, with the possibility of a deep-seated malignant growth as its cause. Cancer was contemplated in view of the continuous loss of flesh and strength, the age and race of the man, the insidious onset, and, not least, the apparent absence of *paroxysmal* pain. Wishing to give the patient the benefit of the doubt, he was treated for catarrhal hepatitis by the administration of nitro-muriatic acid thrice daily, and potassium iodide in hot water between meals. Besides this, rest in bed, milk diet and the daily application of strong sinapisms over the painful area. After three days the stools became normal, urine was much lighter, conjunctivæ partially cleared up and the patient felt greatly better and highly gratified. Fractional doses of calomel were then ordered, which produced numerous loose stools and still further improvement in both subjective and objective symptoms, so that without permission he left his bed, went down stairs and took a walk. He soon realized that his ambition was greater than his strength, and was obliged to return to bed. This was followed by a return of all the symptoms, with clay-colored stools and signs of intestinal fermentation, no doubt from the absence of bile. The original treatment was resumed with the addition of capsules containing ox-gall to supply the necessary bile. Symptoms were again relieved except the tenderness and dull, constant pain, but he refused to take any nourishment because it distressed him. During this time fever had been more or less constant, the temperature rising as high as 102½°

The following day he began to spit mouthfuls of blood, and the next day he vomited about half a cupful of bright liquid blood. This was rather hard to explain and we were wont to ascribe it to venous stasis from portal congestion. Accordingly Rochelle salts was ordered taken before breakfast in hot water, with the idea of relieving the passive congestion. The laxative action of this brought away large clots of blood from the bowel which only served to make the case more obscure in its nature.

At this juncture the temperature fell

to 96½° which, of course, was explained by the internal hemorrhage. During the next two days more clots were passed per rectum and more blood was spat up, and he grew weaker and weaker and died in a semi-comatose state on August 14th, just four weeks after treatment was begun. For the last three days of life, the tenderness spread over the epigastric region and was so marked that palpation was impossible.

An autopsy was allowed because the insurance company, in an over-bearing manner, claimed that if cancer was the cause of death they would efuse to pay the money inasmuch as the patient had taken out his policy only three months before death, and in the nature of things the malignant growth must have been there before—a lame argument, as the risk had been accepted. However, as the case turned out to be gall stone, the money was paid without murmur.

On opening the body the abdominal organs and tissues were found deeply bile-stained, and about one quart of ascites present. Liver not enlarged and surface smooth. Strangely enough the gall-bladder was not distended but its left side was adherent to the anterior aspect of the stomach near the pylorus, and when this adhesion was carefully separated a small perforation was noted through this double wall, through which the bile had escaped into the stomach and thus prevented its accumulation in the gall-bladder. Perihepatitis had caused the liver to be tightly adherent to the diaphragm, and the stomach and several coils of small intestine were covered with inflammatory lymph. In the initial extremity of the common bile-duct, was tightly wedged a large spherical calculus, measuring three-fourths of an inch in diameter and weighing forty-five grains. No other stones were found. Upon opening the stomach, which was also bile-stained, four clear-cut, irregular shaped ulcers were found involving the mucous and sub-mucous coats, and measuring about one-fourth to one-third of an inch in diameter, and at the base of two of these a small blood vessel was exposed which had ruptured and which evidently had been the source of the hemorrhages. At two other positions white spots were found which were evidently beginning ulcers also. The other organs were normal.

In reviewing this case, several points impress themselves upon us: first of all, the *constant* pain and tenderness, which were the misleading symptoms pointing toward malignancy, were no doubt due to the perihepatitis. The absence of *paroxysmal* pain may have been due to the fact that the gall-stone was so tightly wedged in that it made no new attempts to pass.

Then the very unusual perforation which took place from the gall-bladder into the stomach, was most interesting and accounted for the stools resuming their natural color, an effect we supposed to be the result of treatment at the time, but which was really only a coincidence, and misleading because it made us think there might be present only a simple catarrhal hepatitis, and contra-indicated operative procedure. The ulcers were, no doubt, secondary to the hepatic involvement, but were immediately responsible for the fatal termination of the case by hemorrhage. They were, in all probability, the result of a highly depraved nutrition, for the patient took practically no nourishment during the last three weeks of life.

Bacilli and Nitric Acid.—Bacteriologists have been for some time familiar with the fact that the common bacilli produce nitric acid and nitrite, but instead of seeking in these secretions the cause of the destructiveness of the microbes, they have directed their attention chiefly to the poisonous albuminous substances they have discovered in "cholera culture," but which prove to be the contents of the dead bacilli, and therefore perfectly harmless so far as the genesis of the disease is concerned. It is the active product of their vital function, and not any lifeless residium of decomposition and decay that works the mischief. By a series of experiments on rabbits, Profs. Esmerich and Tabor have shown in a Munich journal of the 10th of June, that the symptoms of cholera and of poisoning by nitrite are perfectly identical in their action on the blood, and on every part of the organism. These statements of the learned professors are undoubtedly correct, and in looking to the ptomaines for the deadly poison, there is opened a very important avenue for the therapeutic study of the disease.—*N. Y. Med. Times.*

A CASE OF SENILE GANGRENE TREATED BY AMPUTATION.*

G. W. H. KEMPER, M. D., MUNCIE, INDIANA.

The patient was Mr. A. W. C., farmer, native of Ohio, and aged 73 years.

In 1893, an attack of rheumatism began and continued for about one year,—nine months of the time being confined to his bed. Although never very strong, yet he had led an active, stirring life. He had been a moderate drinker of alcoholic liquors. In the early part of the year 1891, he began to experience some pain in the left leg and foot. By the first of June, the pain was quite severe and accompanied with a sensation of chilliness. The pain gradually increased, and was described as stinging. He became quite a sufferer. About the first of September, he was removed from his home in Ohio to the residence of a daughter in Yorktown, near Muncie, and came under the professional care of Dr. Shively, of the former place.

About the 6th of September, a small, black spot appeared on the third toe of the left foot, and soon extended over the entire toe. At the same time the dorsum of the foot in the metatarsal region became reddened.

I first saw him on the 13th day of September, at which time the third toe was completely gangrenous. He was suffering a great deal of pain in the affected foot. It was evident that the arteries *of* the extremities were more or less atheromatous. His condition gradually and constantly grew worse and the quantity of opiates had to be increased in order to secure rest. Several circumscribed spots appeared over the leg and his general condition was not reassuring. The propriety of an amputation was discussed, and its chances were explained to the patient and his children. He decided to undergo amputation of the leg. I may add that an examination of the urine showed nothing abnormal.

On the 28th of September the gangrene had extended over the second and third toes and two inches upon the dorsum of the foot, and a well-marked line of demarcation was formed. The pulse was 92, temperature 100½°. At this date, assisted by Drs. Shively, Shields, Cowing and Coffin, I amputated the leg through the middle third, by the flap method. At the time, the discoloration on the leg had disappeared and the skin appeared healthy. Proper antiseptic precautions were observed,—ether being used as an anæsthetic. Upon making the section it was found that all the arteries were completely calcified; and not one was ligated. Two veins permitted more blood to escape than was desirable, and these were tied.

The operation was almost a bloodless one, and he soon rallied. He suffered considerable pain during the first twenty-four hours after the amputation, but never afterward except at dressings of the stump. He was supported by stimulants and generous diet.

The highest temperature reached was October 1st, when the thermometer registered 104°. He exhibited considerable delirium for a few days after the operation, and quite often somnolency was so profoundly marked that it required some effort to arouse him. He manifested quite a tendency to the Cheyne-Stokes respiration. On the third of October, about a tablespoonful of grumous pus escaped. From this time sloughing of the upper flap began, and continued until the tibia was exposed for a length of two inches. This portion of bone was soon denuded of its periosteum.

About one month after the amputation, the patient was seen by Dr. Marsee, of of Indianapolis, and, at his suggestion, we placed the stump in a tin splint, which contributed a great deal toward the immovableness of the tissues and aided granulation. The exposed bone gradually exfoliated and during the months of December and January was entirely separated. The soft tissues continued to throw out healthy granulations which slowly but gradually covered the extremity of the bone, and finally closed over the healthy skin, leaving a smooth and well-formed stump.

I saw the patient on the 17th of May, 1892, and found the stump in an excellent condition.[*] The circulation in the remaining foot and leg appeared to have improved since the removal of the diseased member. He was in an excellent state of health, but disposed to remain in the recumbent posture much of the time, because, as he remarked, "He had lain in bed so long that when he got up he ached and felt sore."

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* Read before the Miss. Valley Medical Association, October 5, 1893.

I have presented this case because of its clinical interest. A few points might be considered in connection with its study. The gangrene was due to the atheromatous degeneration of the arteries. The supply of blood to the extremity became less as the lumen of the arteries decreased by accumulated deposits upon their walls. Finally this supply was insufficient to nourish the extreme parts, and death necessarily followed. It was not associated with diabetes as many of these cases are.

Was amputation justifiable? I think the result of the case, although slow in process of healing, is a sufficient answer. While I am of the opinion that surgical measures were proper, I am inclined to think that we erred in not selecting a higher point of election for amputation. The red spots that were present on the leg early in the history of the disease, although absent at the time of the operation, indicated a low vitality of tissues unfitted for an amputation.

Since I encountered this case, I have taken some pains to investigate the subject and note the observations of those who have had a more extended experience, and I feel that my researches may aid others,—hence I record them in connection with my solitary case.

Mr. Jonathan Hutchison was one of the first operators to call attention to the great value of high operations in senile gangrene.[†] He gives credit for earlier commendation of the operation to James.

The same month in which I operated, September, 1891, Heidenhain, of Germany, published a valuable paper based on twenty-five cases he had seen in the clinic of Küster, at the Augusta Hospital in Berlin.[‡] These twenty-five patients underwent thirty primary amputations, three requiring double, and one a triple amputation. In ten of the subjects gangrene of the stump followed and secondary amputation was performed.

In a recent article,[||] Dr. Charles A. Powers has made an excellent summing up of these cases, and I quote his words: "Analyzing these cases, we find that four times, in circumscribed gangrene of the toe, Küster disarticulated, but that in every instance gangrene of the flaps occurred and extended to the foot. Lisfranc's amputation was secondarily carried out on one of these patients; he developed further gangrene and died of sepsis. A second was further amputated at the knee and again higher, the latter operation accomplishing cure. Both of the others were healed only after amputation through the femur. In three cases of primary amputation through Chopart's joint, the gangrene progressed in two and required femoral amputation. Primary amputation through the leg was employed six times; one case died from gangrene of the flaps and sepsis; three were saved by amputation through the thigh; the other two were healed after gangrene of the edges of the flaps and necrosis of the sawn surface of the bones. Of these thirteen low primary amputations, only two went on to healing, these in leg amputations; two patients died of gangrene of the flaps and sepsis; the remainder, nine, were saved by secondary amputation at or above the knee.

"Of the seventeen primary amputations through or above the knee-joint, nine were cured, while eight died of diabetic coma or heart weakness. Of the ten secondary amputations, all recovered. Separating, now, the diabetic from the non-diabetic cases, we find that of the eleven diabetic patients six were cured, while five died; and of the fourteen patients with simple senile gangrene, nine were cured, five dying. The fatal result was due to gangrene of the flaps and sepsis in two cases (one Lisfranc's amputation, one through the leg, both in the early days of antisepsis); in one case a man, aged eighty years, died at the end of nine days, from heart failure; one man, aged seventy-eight years, succumbed to hypostatic pneumonia; and another, aged fifty-two years, died at the end of nine days, with myocarditis, nephritis and ascites. The list shows that through the high amputation all patients were saved who were not severely afflicted with some general disease."

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[*] He died of an acute disease in December, 1892.

[†] *Medico-Chirurgical Transactions*, Vol. 66, (1884).

[‡] *Deutsche Medicinische Wochenschrift*, (1891).

[||] *American Journal Medical Sciences*, Nov., 1892.

In conclusion, I offer the following deductions:

1.—While the gangrene is confined to one or two toes, it is best to defer amputation. If the disease extends to the dorsum of the foot, amputation is proper.

2.—Amputation below the knee is rarely successful, owing to lack of proper blood supply and tendency to recurrence of gangrene in the stump.

3.—Amputation through the thigh will save a large per cent. of the cases, and especially so, when the subjects are free from a general disease. Mansell-Moullin observes that usually the thigh is small and wasted in the lower third; the artery is sound in Hunter's canal; the flaps are well supplied with blood; and old people, as a rule, resent operation very slightly; their tissues are not prone to inflammation.

4.—When amputation has been performed below the knee and gangrene appears in the stump, unless the patient is exhausted, it will be proper to perform a secondary amputation above the knee.

AN UNUSUAL CASE OF HEMORRHAGE OF THE UTERUS.

CLARA T. DERCUM, M. D., PHILADELPHIA.

The subject of these notes is an American girl of German parentage, aged twenty-six years, of a large well developed physique and by occupation a sales woman. Previous to this her present illness, she had always enjoyed perfect health. Her menstrual flow had without exception been normal in amount and duration, and it was only occasionally accompanied by a dysmenorrhœa which was scarcely sufficient to cause her any inconvenience. She menstruated normally in December, 1891, the flow beginning on the 24th of the month and continuing as usual for four days. Her next period, however, was delayed for nearly two weeks beyond the normal time, which was unusual in her case, not making its appearance until February 3rd, 1892. The flow was normal in character for four days. On the fifth day, however, instead of ceasing it became so profuse that from seven to eight napkins were required daily. As this condition continued for several days she finally sought medical advice.

Her history, which was obtained later, is briefly as follows: She had been gradually running down in general health for about one year and was undergoing a severe mental strain at the same time. This was in reference to breaking an engagement of marriage which she had come to regard as a very unwise one.

When she first consulted me on February 9th, I gave her a prescription containing hydrastis, ergot and dilute sulphuric acid, with the injunction that if the flow did not cease in a couple of days she was to remain at home. February 12th, she stated that the medicine had had no effect on the flow although she had remained at home for two days resting quietly. The mixture which she had been taking was continued with the addition of the deodorated tincture of opium, but as her stomach soon refused to tolerate it it was discontinued. Rectal suppositories containing one grain of opium and two and a half grains of ergot were substituted and administered every two hours. Her diet was non-stimulating, consisting chiefly of cold milk, luke warm broths and toast. In spite of this treatment the flow increased in severity. On the seventeenth of February a digital examination was made; the hymen was found intact so that the examining finger was only introduced with difficulty, the uterus was uniformly enlarged and flabby; the external os was so soft and patulous that the finger could be carried to the internal os without any trouble; the condition of the external genitalia as well as the entire absence of pain negatived the idea of an abortion, so that that as a factor in the causation of the hemorrhage could be safely excluded. Vaginal injections of water, from three to four gallons as hot as could be borne, were now given three times daily, a rubber tube attached to the bed pan carrying it to a bucket at the side of the bed.

The faradic current of quantity, one pole placed on the abdomen and the other on the sacrum, was also used three times daily for periods of fifteen minutes. As this treatment was without avail in checking the flow of blood, another digital examination was made on the 21st., and the condition found unchanged. A bipolar intra-uterine electrode was introduced two days in succession, and the faradic current of quantity used for fifteen minutes, this was followed by a bi-polar-vaginal electrode for the same length of time. This failed to stimulate the uterus to contraction as had been anticipated, the flow if anything increasing in quantity. Ergot and opium had been used continuously by the rectum during this period, one-thirtieth of a grain of strychnine together with the tincture of the chloride of iron had also been given three times daily.

On the 22nd, sixty-five grains of Squibbs extract of ergot were given hypodermically, this was repeated the following day. This also had no effect in diminishing the flow, which had now continued without intermission for twenty-one days, at times being profuse enough to saturate the bed. This steady drain had now reduced her from a healthy, robust looking girl to a physical wreck.

Realizing at last that if the flow continued at the same rate a few days longer the girl would die of exhaustion, I asked Dr. Eleanor C. Jones and Dr. F. X. Dercum to see her with me in consultation, which they accordingly did February 23rd.

After an examination as thorough as could be made without ether, we decided that the uterus was uniformly enlarged, but whether this was due to an excessive engorgement, or to some growth in the cavity, or to a rapidly growing intra-mural myoma could not be determined. On the morning of the 24th she was etherized with great care for we were afraid of heart clot in her then exsanguine condition. The sound passed three inches into the cavity of the uterus, which was now rapidly dilated, nothing abnormal being found either in its cavity or its walls. It was thoroughly curetted with a sharp curette and some hypertrophied mucous membrane removed. A solution consisting of two-thirds pure carbolic acid and one-third pure iodine was carried into the cavity on an applicator. The organ contracted on it with such force that its removal was only effected with difficulty.

Dr. Joseph Price examined her on the afternoon of the same day and stated that the uterus had contracted to its normal size. He had been called in to see her, for if we had not succeeded in checking the hemorrhage by the above procedure a gastro-hystorectomy would have been considered. Fortunately for the patient this was not required as the curetting and application of the solution above mentioned gave immediate relief, only a pale watery flow continuing for a few days.

A few weeks of complete rest in bed and a month at the sea-shore, together with mental quiet—for her engagement had been terminated—soon restored her to perfect health. During her convalescence iron and strychnine were freely used. Up to the present time her periods have been as formerly normal in amount and duration.

The obscurity of the etiology of the case is interesting, for why a young woman in apparently good health should be taken sick in this manner does certainly seem unexplainable.

Perhaps I may be open to criticism for not having resorted to more radical measures sooner, but there seemed to me in the beginning of her illness to be no special reasons for thinking that simpler measures would not effect a cure.

FRUIT.—Fruit will destroy the desire for alcoholic drinks. Oranges and apples have been found to be the most effectual cure for inebriates, and the more they eat of these luscious fruits the more the desire for drink will diminish, until at last it is completely crucified, and so far as that individual is concerned, obliterated. —*The Vegeterian.*

HOW TO EXTINGUISH FIRE.—Take twenty pounds of common salt and ten pounds of sal ammoniac (muriate of ammonia, to be had of any druggist), and dissolve in seven gallons of water. When dissolved, it can be bottled, and kept in each room in the house, to be used in an emergency. In case of a fire occurring, one or two bottles should be immediately thrown with force into the burning place so as to break them, the fire will certainly be extinguished. This is an exceedingly simple process and certainly worth a trial. *Med. World.*

THE ANATOMY AND SURGICAL TREATMENT OF INGUINAL HERNIA AND ITS BETTER METHODS FOR CURE.*

HENRY O. MARCY, M. D., LL. D., BOSTON, MASS.

The radical cure of hernia is a subject at present which engages the attention of surgeons with much more than former interest. Quite a number of operators upon both sides of the Atlantic have reported long lists of cases operated upon with varying, but very large percentages of resultant cures. The advance made in this direction is based upon the well-known rules of aseptic surgery, which permit of free dissection, laying bare the parts involved which permits, as in no other way, a reconstruction of the abdominal wall and the replacement of the cord; in a word, that the pressure from within the abdomen shall no longer be exercised in the direct axis of the opening. The work of Bassini in Italy, of Kocher in Switzerland, of Postkempsie in Russia, is quite parallel to and on the same line of research as that which pertains to a number of operators in our own country, notably Park of Buffalo, Bull and Cooley of New York, Fowler of Brooklyn, and Halsted of Baltimore.

The essential conditions for the restoration of the structures are agreed upon by all, namely: A free dissection in order that the cord may be lifted from its acquired pathological site, the canal restored in its obliquity, the internal ring closed from below upward closely upon the cord at its exit from the abdominal cavity, and the structures posterior to the canal reinforced and strengthened. Little by little this has been emphasized until now Halstead and Fowler have made the bold innovation of bringing the cord entirely external to the strong aponeurotic structures of the abdominal wall, to-wit: the fascia of the external oblique, making an entirely new canal for the spermatic cord. This innovation, however, is too recent to yet determine the full value of the procedure.

To Dr. Marcy is accredited the innovation of a free dissection, lifting the cord entirely from the canal and restoring the subjacent parts in a way to make the reformed canal at or near a right angle to the direction of the intra-abdominal pressure. He commenced his efforts in this connection more than twenty years ago, and in order to successfully accomplish the work believed it necessary to utilize sutures which could be buried in the tissues and there remain undisturbed. It seemed a ready inference that if animal ligatures could be applied to the larger arteries in order to produce their occlusion and yet remain without irritation or further disturbance of the parts, this should pertain also to the coaptation of the deeper structures of the body and their retention by a similar method. A series of histological studies upon the lower animals were undertaken by Dr. Marcy and the demonstration made complete that animal ligatures were more or less slowly absorbed and disappeared, leaving only a replacement of connective tissue structures at the site where they were imbedded. It was further demonstrated that this process varied very greatly; that with silk the suture was encysted and oftentimes was made unirritating in a permanent way; not seldom, however, such sutures became an irritant and they were slowly expelled by a process of proliferation, oftentimes after many months of localized pain, although the wound was entirely aseptic. This was true as a rule with silk-worm gut and silver wire. On the other hand, catgut, as ordinarily prepared, was untrustworthy by being absorbed too quickly and leaving the coaptated structures to yield before union had become firm. Chromicizing of the suture material after the manner of Professor Lister, however, renders the suture material much more resistant to the process of absorption, and as a consequence, makes it much more trustworthy. For many reasons, Dr. Marcy found that the tendon suture, as obtained from a considerable variety of animals, furnished a material of far greater value; that from the tail of the kangaroo being quite superior to tendon obtained from any other source.

Dr. Marcy illustrated his lectrue by a series of slides, reproducing the magnif cent illustrated work of the old masters—Kemper, Cooper,. Scarpi, Bougerey, and others. By a general consensus of opinion the profession is indebted to Dr. Marcy as an innovator in this field of labor. He has established the value of the buried animal suture, and had published his results quite five years before the report of Weith of Germany, to whom in Europe the credit is generally attributed. The essential principles of his operation for hernia have become universally accepted. The results of the work of a large number of the modern operators give from 70 to 90 per cent. of permanent cures.

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* Abstract of an Address on Surgery, delivered before the general session of the Mississippi Valley Medical Association, October, 1893, at Indianapolis, Indiana.

In résumé, Dr. Marcy claims that the peritoneal sac, as a rule, should be resected after suturing quite to its very base; that the deeper structures which go to make up the posterior wall of the inguinal ring should be reinforced and restored to their original normal condition; that the external wound should be closed without drainage and the skin wound sealed with iodoform collodion. In his large experience, involving several hundred cases, he states that where the intestine has not been involved from strangulation or other cause, not one of his patients has appeared to approach the danger line, and that of the entire number which he has been able to trace, more than 90 per cent. have remained after one year permanently cured.

INVALID PENSIONERS AS LIFE INSURANCE RISKS.

H. T. GUSS, M. D., Washington, D. C.

An invalid pensioner may be a good and acceptable life insurance risk; and, conversely, a man who is a suitable subject for life insurance may be justly entitled to an invalid pension.

Much has been said lately in the way of adverse criticism and to make a comparison of the conditions appear ridiculous and reproachful to the veteran soldiers of our country.

But such statements and insinuations are reflections alike upon the veterans and the members of the medical profession as well, and are evidently made by those who are ignorant as to the qualifications of the applicants in either case.

The physicians of the country, in their varied functions as the medical examiners for the life insurance companies, as the examining surgeons for the United States pension office, and as the attending physicians of the applicants for insurance and the claimants for pension, are the responsible agents in all cases. All pensions are allowed upon the certificates of medical examinations or the medical testimony, more or less complete, filed as proof of the existence and continuance of disabilities, according to circumstances in each individual case. The exceptional cases not covered by this statement would not be over one or two per cent., and include those issued under service pension laws, etc. A thorough physical examination by a qualified physician is an invariable pre-requisite to life insurance.

Prominent physicians in many communities act as examiners for both insurance and pensions.

Whether the application is for insurance or pension or both, the physical examination and medical evidence will admit or reject the claim.

What is the condition and situation of a claimant for pension?

He desires that his physical disabilities shall all be noted, as the amount of his pension is largely determined by the extent and degree of disability from a certain cause or all causes. Like the patient in ordinary medical practice,.he endeavors to describe fully and clearly the history and every detail of the disease or diseases of which he complains, and conceals nothing, so as to give the examiner a complete understanding of his condition. The examiner acts upon that which is reliable and confirmed by his examination. He has probably found some apparent evidences of disability from injury or disease or some functional disturbances, and recommends a pension.

Look now at the applicant for life insurance. He wishes to appear well and strong. He may declare he is in good health, and in all his personal and family history, without concealing any material facts he may be inclined to emphasize only those features which appear to him favorable to his case. He may or may not state that he is a pensioner or a claimant for pension. The medical examiner, having carefully gone over the formal application for insurance and reduced to writing a statement of certain facts relating to personal and family history as to health and disease, which is signed by the applicant and becomes a consideration of the contract, makes a thorough and complete physical examination. He finds the applicant without any apparent evidences of organic disease and recommends his insurance.

Supposing the same individual has been examined in each case, here is a paradox. The claimant for pension is disabled and pensionable; but, as an applicant for life insurance he is at the same time sound and insurable.

How is it? The liberal interpretation of "disabled" and "sound" at once renders the conditions much less antagonistic.

The insurance companies could not do business if they required a perfect physical development and condition and a faultless family and personal history, so few would be found eligible.

There is a general or average standard, but each case is passed upon its own merits. Every case has its individual equation, the several factors having different values and relations to be considered in their bearing on the particular case. In addition to the physical examination, the habits and occupation of the claimant are taken into account. Many companies, for example, will not insure men who are engaged in certain occupations, but may under certain conditions, insure one who has had a leg amputated at the knee if he is otherwise sound and whole.

Usually, the loss of a hand or foot or other lesser amputations the result of injury, the loss of an eye, total deafness of one ear, complete hernia not complicated, anchylosis of joints and permanent scars and deformities which are the result of gunshot wounds, and many other disabilities of a kindred nature, are not considered a bar to life insurance, but all of them would be pensionable.

Claimants are pensioned and justly entitled to pensions on account of these disabilities as well as for permanent evidences of rheumatism, chronic diarrhœa, malarial poisoning, the effects of scurvy and a host of conditions which may exist in a degree which almost every life insurance examiner would ignore in making his recommendation for insurance.

With regard to the question as to whether the applicant for life insurance is a pensioner or a claimant for pension, it may be noted that a careful examination of the special instructions to medical examiners recently issued by twenty-four of the most prominent life insurance companies of this country shows that only two of them direct attention to this point. In one of these, under the head of "questionable risks" are enumerated among others "persons who draw pensions on account of disease or present physical disability."

It might be presumed, from the fact that only two companies in twenty-four raise the question formally that it is regarded by them as a matter of little concern, but it must be remembered that the fact of an applicant being a pensioner will be brought out in nearly all cases in his statement made to the medical examiner, which, we have seen, is made a part of the contract.

Extended inquiry among personal friends and others who are drawing pensions has elicited the fact that quite a good percentage are insured and that in the majority of the cases the insurance was effected after the allowance of the pension and generally with a full knowledge of the fact and circumstances on the part of the insurance companies.

In the matter of pensions, our country has been very liberal, and its policy differs from that of most European powers in that pensions are confined almost exclusively to the military and naval service. "A pension is a gratuity and not a debt." It is held that the pension laws are beneficent in character and their interpretation should be broad and liberal. In cases appealed to the Secretary of the Interior it was decided that "an application for life insurance by a pensioner does not forfeit pension if disability still exists," and that a claimants' statement as to soundness is not a bar to pension."

From the foregoing it will be seen that the conditions are not incompatible. It should not, therefore, be considered that a pensioner must be an invalid or a physical wreck. The fact that a man receives a pension may be an important one to an insurance company—but merely as a fact. If its medical examiner finds him in good physical condition he can be insured and continue to draw a pension at the same time.

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SATURDAY, OCTOBER 21, 1893.

EDITORIAL.

HARD TIMES AND FREE MEDICINE.

From every part of this great and rich country the news comes to us of extreme stringency in the financial position of our *confreres* the general practitioners. Never was there a richer opportunity for the masses to play the pauper than now. The present panicy state of the money-market affords people an immense excuse for wholesale imposition on the profession. The conditions of the times will not give them free bread, free clothes, free transportation on the railroads or rent free, but they hie away to many of our too numerous hospitals and dispensaries for free treatment—advice, medicine and all included for nothing, or for "ten cents"—the figure fixed in certain palatial infirmaries.

The consequence of all this has been most demoralizing to the profession and the public. Practitioners reduced to a state of enforced idleness and grim want, are forced either to quit their profession altogether, or to "meet *steal* with steel," to open rival dispensaries, to advertise, or to drift into down-right quackery.

Many cases have come to our knowledge which go to prove that the practice in vogue in many of our largest dispensaries is a species of downright robbery and tends to work incalculable harm to the profession. Case after case is taken from among people of ample means and turned over to the hospital or to the college professor for his clinic, without a word being asked as to their mendicity or ability to pay anything at all. Cheap railroad excursion rates drain the outlying villages for miles in every direction.

This hydra-headed monster of indiscriminate free treatment must be siezed and strangled or we will soon see the profession of medicine dragged in the dust; open downright quackery will be rampant and integrity and honor in the healing art will be things of the past.

By no means let us withold our services to the poor and deserving, for humanity compels us to gratuitously attend those without means. Nor let us strip the field of such clinical material as legitimately belongs to the teacher, but let the teacher not forget that he has no prescriptive right to filch from the struggling practitioner what justly belongs to *him.*

BACTERIOLOGICAL NOTES.

WATER FILTRATION AND CHOLERA.

Koch (*Zeitschrift f. Hygiene und Infectiuas krank heiten*, XIV 1893), brings out a large number of interesting facts concerning the relation of water supply to cholera. The statements in this article conform to the results which the author has heretofore obtained in his investigations of cholera and its prevention. The recent (1892) epidemic of cholera in Hamburg has furnished the opportunity for Koch to verify his theories concerning the relation of drinking-water and the transmission of cholera and typhoid fever. The importance of this subject in its practical application to our own water supplies renders a somewhat careful consideration of this article very desirable. The experiences of Hamburg, Altona and Wandsbeck are exceedingly instructive. These three cities which are adjacent to each other form practically one city excepting their water supplies are separate. Wandsbeck is supplied with filtered water from a lake which is not exposed to contaminating conditions ; Hamburg gets its water from the river Elbe above the city, it uses the water in an unfiltered condition ; and Altona is supplied with filtered water taken from the river below the city.

The points to be observed are, that while Hamburg was frightfully stricken with cholera, Altona and Wandsbeck were practically free from it. It is of further interest to consider that Hamburg took its water from a point in the river where its contamination was slight while Altona drew its supply from the river after it had received the sewage of 800,000 people. The line of demarcation was very striking. On one street which for a long distance forms the boundary, the Hamburg side was badly infected with the disease while the Altona side remained free from it. Still more singular is the fact, that one group of houses on the Hamburg side which were supplied with water from the Altona side remained uninfected.

Koch attributes the comparative freedom of Altona to the filtration of its water. Four-fifths of the cases which did occur in Altona were traced to an infection in Hamburg. The experiences of the present year, however, have shown that a filter bed of itself is not sufficient protection. The bed must be complete in every particular and the filtration must be conducted in the most thorough and painstaking manner and with frequent bacteriological examinations for a control on the filter. Epidemics of typhoid fever in Altona have demonstrated the existence of a connection between the disease and imperfect filtration. [The observation and results will cause the Pettenkofer school some trouble to answer or explain. —ED].

"GIVING THE QUILT."—The Queen, says *Hearth and Home*, is an expert and indefatigable knitter. During the Egyptian campaign she and the ladies of the Household employed themselves in knitting quilts, which, at the end of the war, were sent to Netley Hospital for the use of the wounded. One of these, made entirely by her Majesty, and bearing an elaborate V. R. in the centre, was the coverlet *par excellence* of the institution, and in universal demand for a time. In assessing the claims of the candidates for the honor of sleeping under it, the medical staff naturally gave the precedence to the most severly wounded, and as the most severely wounded was the one most likely to die, very soon, alas ! an evil omen attached itself to the distinction, the climax of which was reached one night, when a poor soldier, feeling some one touching his bedclothes, woke up with the perspiration pouring down his face, and cried out, "Oh, sir, do anything you like with me, but for God's sake don't give me the quilt !"

TRANSLATIONS.

PSEUDO-MEMBRANEUSE ENTERITIS AND ITS ROLE IN GYNECOLGY.*

In the *Annales de la Policlinique de Bordeaux,* May, 1893, Monod remarks that he has frequently noticed in women who are suffering from uterine disease the existence of intestinal symptoms characterized by colic more or less acute and by the discharge of membranous debris with the stools. At times the patients have noticed this phenomenon themselves, but usually they have only taken notice of it after an interrogation which has directed their attention to this special point. The relative frequency of this clinical observation has induced Monad to suspect that perhaps there exists between the uterine symptoms and the intestinal symptoms more than a simple coincidence. Pseudomembranous enteritis considered as a morbid entity has provoked during recent years a certain number of interesting works where this affection is described as a distinct variety of enteritis, or more precisely, of chronic colitis. Van Swieten, Fernel, Woodward in America, and many others among whom may be mentioned Professor Potain, have insisted upon this special form of chronic inflammation of the mucosa of the large intestine, which may be readily recognized by the quite distinctive character of the products expelled with the stools. At times these are simply slimy or with filaments of a glutinous appearance ; at times the patients expel veritable membranous ribbons which may present a length of 30 or 40 centimeters and which closely resemble often the debris of tapeworms. From this comes the various names which have been given to this disease, *glairous, dry, glutinous, pseudo-membranous colitis.* The authors have noticed the coincidence of this affection with hysteria and the neuroses. They have likewise called attention to the frequency of habitual constipation in the patients so afflicted. In certain cases the intensity of the pains added to the gravity of the general state of the patients has given rise to the error of diagnosis of ascribing the condition to the probable existence of cancer of the intestine. In 1888, Monad presented to the Society of Anatomy of Bordeaux the false membranes passed in large quantities by a woman 47 years of age, who was subject to very acute painful crises and who was considerably emaciated, and who had been treated by her physician as suffering from intestinal carcinoma. She was suffering, however, only from membraneous entero-colitiswhichwas eventually cured. But if the clinical history of chronic colitis is to-day well recognized, the authors seem to be but little preoccupied in searching for the links which may bind this condition to an affection of the uterus or of its appendages. Monad has searched in vain in the classical treatises upon gynecology for any mention of pseudo-membraneous enteritis in the cortege of symptoms which accompany diseases of the internal genital organs of the woman. The characteristic clinical manifestations are as follows :

The *pain,* a nearly constant symptom, located most often towards the middle of the abdomen, in the region corresponding to the transverse colon. It may be localized in the right iliac fossa at the level of the cæcum. A characteristic feature of this pain is its intermittent and paroxysmal nature; the periods of crisis may vary between some days and several months; it may occur every month synchronously with the menses.

An habitual symptom of this form of colitis is the *constipation.* The authors have insisted upon the tenacity of this constipation which resists all the measures employed to combat it. Finally, in all of the patients there exist nervous manifestations in varying degrees. The patients are always very impressionable, offering the attributes of the most confirmed neuropathic state.

The *anatomo-pathologic characteristics* of the products eliminated by the intestines have been well recognized. At times there are thickened mucosities, which surround the fecal matter and adhere to them. More often there are veritable isolated membranes, very resistant, having the appearance of elongated ribbons or of placques or else gathered together in the form of fibrous bundles. The chemical and histological examination of these products shows, whatever may be their appearance, that they are always nearly entirely composed of mucous.

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* Translated for The Medical and Surgical Reporter by W. A. N. Dorland, M. D.

As regards the treatment of this condition, an affection so irregular in its course and of which the nature is so poorly recognized. it is plain to see that therapeutics is almost disarmed. The choice of an alimentary régime can not be along precise rules. Most of the patients have found that the use of milk was the only possible aliment during the period of acute crisis. Alkaline mineral waters have seemed to be truly efficacious. To these should be added intestinal antiseptics in the form of naphthol or salol. The principal indication is to combat the constipation. For this purpose the oily purgatives are to be preferred. To the same end daily lavements, either simple or boracized, should be administered. Recently lavage of the intestine with an alkaline solution, through a long rectal canula has been proposed in the treatment of membraneous colitis. This is a way which seems rational. When the pains are very acute, the applications of revulsives upon the abdominal wall in the form of tincture of iodine or of repeated vesications, may have good results. In the wealthy clientele one should advise a thermal cure at Vichy, Vals or Plombières; for those patients who are particularly nervous, Néris should be preferred.

As to the relation existing between this membraneous colitis and affections of the genital tract, it is worthy of notice that pseudo-membraneous enteritis is much more frequent in the woman than in man, and these women show deviations in the position of the uterus with or without inflammatory exudations around the pelvic viscera.

HERNIA OF THE VERMIFORM APPENDIX.*

Dr. A. Brieger, Breslau, the author, considers only the cases which contain only the vermiform appendix in the hernial sac. The origin of such hernia can be classed under two heads, the same as all other hernia; namely congenital and acquired. First form is usually found to be caused by the adhesion of the vermiform appendix with the testicle during fetal life. A second cause, of equal importance, which may form during early fetal life, is the patulous condition of the tunica vaginalis; which may act as a channel through which may pass an appendix of abnormal length. Other predisposing causes are, a long mesentery to the appendix and displacement downward of the cœcum.

The author reports six cases of irreducible hernia of the vermiform appendix, the last having occurred at the surgical clinic of Breslau. He further describes eighteen cases of incarcerated hernia of the vermiform appendix, the last one a case also belonging to the above named clinic. He adds two cases in which the hernial sac contained the appendix and a portion of the omentum.

The author concludes his article as a result of his observations:

1. That herniæ of the vermiform appendix are of more frequent occurrence than is generally known.
2. It is impossible to make an accurate diagnosis of such hernia. When symptoms of incarceration occur, hernia may be considered in connection with the right inguinal or femoral hernia.
3. There is always an important point to remember, which is that the vermiform appendix frequently undergoes pathological changes which produce often marked complications.
4. These cases, even if irreducible, require early operations owing to the fact of complications arising from the appendix.
5. The operation, with few exceptions, consists in resection with accurate closure of the lumen, after the method of Mikulicz. Reduction can only be practiced in such cases where the appendix is normal.

—*Arch. f. Klin. Chir.*, 1893

Gonorrhœa Occurring in Little Girls.*

Dr. Cassell, the author, has examined the discharge of pus from the genitals of thirty small girls and found gonococci in twenty-four. The youngest of these was seven months and the eldest eleven years In the greater number of cases the auth was able to trace the infection to other members of the family. Dr. Cassell does not favor the idea that all these cases were infected by direct means, but believes that this class of people living in close quarters, may contaminate each other by means of bed linen, sponges or body linen.

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* Translated for The Medical and Surgical Reporter by Marie B. Werner, M. D.

The diagnosis is of importance. In all cases of gonorrhœal vulvo-vaginitis there was free discharge, and thick, creamy, greenish-yellow pus.

Therapeutically, the author treats the patients by local and general baths, placing the pelvis high for local injections,for which he uses an ear syringe containing 1 to 2000 of sublimate solution daily.

If the discharge becomes less profuse after two or three weeks he uses, two to three times weekly, a one to a one and a-half per cent. solution of nitrate of silver; these are continued until the cure is established, which usually occurs between two and three months.—*Berlin Klin. Wochen.*

ABSTRACTS.

A CONTRIBUTION TO THE HISTORY OF THE DISCOVERY OF MODERN SURGICAL ANÆSTHESIA, WITH SOME NEW DATA RELATIVE TO THE WORK OF DR. CRAWFORD W. LONG.*

LUTHER B. GRANDY, M. D., ATLANTA, GA.

The true story of the first discovery of anæsthesia, and of the circumstances connected therewith, has not yet been told in print. Reliable history is never written by the generation which make it. The generation which inaugurated the era of painless surgery has passed away; the participants in the long and bitter controversy over the question of priority have disappeared; and those of us who have since come upon the scene may now undertake to gather up the data relating to that great discovery, unaffected by favor and unbiased by prejudice.

In 1839, Velpeau, of Paris, described the attempts to find some agent capable of preventing pain in surgical operations as nothing less than chimerical; and in 1846, Sir Benjamin Brodie, of London, said: "Physicians and surgeons have been looking in vain, from the days of Hippocrates down to the present time, for the means of allaying or preventing bodily pain." Yet four years and a half before that statement was made, surgical anæsthesia, under the influence of ether, had become a demonstrated fact in a Georgia village, in the hands of Dr. Crawford W. Long. The claims of Dr. Long to the honor of this discovery have been presented to the world by no less a champion than the distinguished J. Marion Sims himself. Dr. Sims' article appeared in the *Virginia Medical Monthly* May, 1877; but it was hurriedly prepared on the eve of the author's departure for Europe, after an imperfect correspondence with Dr. Long and others, and contains some errors which the latter was anxious to have corrected. Upon these errors the claim has been raised that to another belongs a large part of the credit which the profession has accorded to Dr. Long.

My own interest in this matter is due to an accident, which need not be related here. For the purposes of this paper I have been kindly furnished by the Long family with all the documents, correspondence, and certificates which had been gathered by Dr. Long in support of his claim to priority. I have had access to papers which Dr. Sims never saw. I have talked with some persons, and corresponded with others, who were personally acquainted with Long and his work in 1842, and am thus able to present some features of the case hitherto unpublished.

The paper of Dr. Sims had its origin in an interview with Dr. P. A. Wilhite, of Anderson, S. C., October, 1876.† Dr. Wilhite was witnessing one of Dr. Sims' operations in New York, and remarked that he "assisted at the first operation ever performed under the influence of ether." He then said that this operation was done by Dr. C. W. Long, of Jefferson, Ga., in March, 1842, while the patient was completely anæsthetized with sulphuric ether. He "presumed that he (Wilhite) was the first person who ever profoundly etherized any one," and then related how he had playfully and unintentionally etherized a negro boy to the point of complete anæsthesia in the fall of 1839, near Athens, Ga. Sims' article makes it appear that four young men—Wilhite Groves, and two Longs (relatives of Dr. Long)—were medical students in the office of Dr. Long prior to the events of 1842, and the author states that Wilhite's story about the negro boy encouraged Long in his belief that ether might be used for surgical purposes. These statements of Sims', based entirely upon information received from Wilhite himself, have caused the friends of the latter to manify his relation with this matter, and even to enter a claim in his behalf.*

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* From the *Virginia Medical Monthly*, October, 1893.

† Dr. Wilhite died in the early part of this year. I heard of his death, for the first time, after this paper was begun.

As a matter of fact, Wilhite did not become a student of Dr. Long in his office until the latter had done several operations under ether. After graduating at the University of Pennsylvania, in 1839, Dr. Long spent one year in New York city, and returned to Jefferson, Ga., to practice medicine in the summer of 1840. It is not likely that he would have attracted four students to his office at the age of twenty-five. He had no students under him until after his marriage, August, 1842, and the first was his cousin, Dr. J. Long. In another place in Sims' paper, Wilhite is made to say that he assisted Dr. Long in operations "under the influence of ether in 1843 and '44, while he was a student in Dr. Long's office." Wilhite was not even present at Dr. Long's first operations. In the entire volume of papers before me relating to Long's first two or three operations, including the sworn statements of parties who were actually present, no mention is anywhere made of Wilhite. Moreover, not until years afterward does it seem to have occurred to Wilhite himself that he had any connection whatever with the discovery of anæsthesia. When Dr. Long's case was being argued before Congress, he obtained from Wilhite a certificate (Feb. 4th, 1854,) with these words: "I entered the office of Dr. C. W. Long, of Jefferson, Ga., in October, 1844, where I continued about eighteen months. Not long after I entered his office, and not later than 1845, I heard the said Dr. Long speak of having used sulphuric ether by inhalation, to prevent pain in surgical operations, he referring to a period of time before I entered his office." The remainder of the certificate states that he (Wilhite) had heard others speak of the operations, and he was under the impression that he had himself talked with the first patient upon whom an operation had been done. Between this certificate and the story as related to Sims, twenty-three years later, there seems to be an irreconcilable conflict.

Up to the time of Dr. Long's death, the relations between himself and Dr. Wilhite appear to have been very friendly. In his interview with Dr. Sims, in 1876, Wilhite said that "Long was the real and original discoverer of anæsthesia, and believed he would be so acknowledged if all the facts in the case were fully set forth." When Sims was in correspondence with both of them during the preparation of his paper, Wilhite wrote Long:

ANDERSON, S. C., Jan. 16, 1877.

"*Dr. C. W. Long*:

"Dear Doctor.—I have just received a letter from Dr. J. Marion Sims, of New York, stating that you will not write to him, or at least that he wrote to you about three weeks ago and had received no reply. If you don't do so soon it will be too late. He has been preparing an article for publication, and wants to place you right before the world. You have been apprised, I suppose, of the nature of the article. Why you have been connected with, and will be the leading spirit in, the article, happened in this way: While I was in New York last summer at one of Dr. Sims' private operations, several prominent physicians being present, I happened to remark that I witnessed the first or second operation ever performed under an anæsthetic. Every one said that I was mistaken, and particularly Dr. Sims. * * * After that I met Sims at his office and gave him such particulars as I could recollect of your first operation, and also urged your claims to the priority.

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* See *Transaction of South Carolina Medical Associations*, April, 1893, and also "History ot Surgery in South Carolina," by Dr. E. F. Parker, *North Carolina Medical Journal*, June, 1893.

He at once wrote you on the subject, and has since become very much interested in the matter.

"Now, Doctor, it is but justice to you, as it is due the world, that you give Dr. Sims such information as he asks for at once, as he is going to all this trouble only to place the proper credit of this great discovery on the man who justly deserves it. I earnestly hope you will comply with the doctors request as soon as possible. As I have been the means of giving the investigation of this subject its present shape, I am exceedingly anxious that you give all the information you can, that you may, and justly too, receive the credit of this great discovery. If you will act, it will certainly be so. Dr. Sims also wants a short history of your life, which don't fail to give.

"Hoping to hear from you, I remain yours, etc.

"P. A. WILHITE."

In reply to this, Long reminded Wilhite that he did not witness the operations, as stated, and asked him to send Sims a certificate similar in character to the one above quoted. Dr. Wilhite replied:

ANDERSON, S. C., Jan. 27th, 1877.

"*Dr. C. W. Long:*

"Dear Doctor.—Yours of the 22nd is at hand, and I have also just received a letter from Dr. Sims, which I will answer to-day. In regard to the certificate you spoke about, it will not be necesary, I think, as Dr. Sims has my statement written out in full. He was very particular to get all the points and facts I could recollect. In my statement *I did make a mistake about my being present at the first or second operation, which mistake I will correct.* (Italics mine—L. B. G.)

"If you still think proper, I will send a certificate. Let me know and I will give you any assistance in this great matter.

"Yours truly,

"P. A. WILHITE."

Sims' article appeared in May, 1877, and Long at once noticed the errors and the absence of the promised corrections. He requested Sims to correct the mistakes, but the latter replied that the "misplacement of a few names and dates would not alter the main facts in the case." He sailed for Europe in a few days, and the matter was dropped.

The above is sufficient to show, beyond the shadow of a doubt, that Dr. Long was the "real and original" discoverer of the anæsthetic properties of ether, *and that he could not have received any assistance or suggestions whatever from young Wilhite.*

It is not material to the strength of Dr. Long's case whether the negro boy incident ever happened or not. However, there is no evidence to show that he knew anything of it until nearly forty years after it is said to have occurred. I have lately had an interview with Miss Fannie Long, to whom Dr. Long had often told and retold the circumstances relating to his discovery. In his later years she became thoroughly familiar with every detail of her father's claim, and at his death he confided to her keeping all the documentary evidence in his case. She tells me that the above story was related to Dr. Long by Dr. Wilhite himself, in the presence of several of the family, when Wilhite was on a visit to her father's house in the spring of 1877. After hearing it, Dr. Long replied: "Doctor, this is the first time I ever heard of it."

There is living near this city an old gentleman, who still preserves a clear recollection of the events of that period, and to him I am indebted for the following letter.

EDGEWOOD, DEKALB COUNTY, GA.,
June 27th, 1893.

"*Dr. L. B. Grandy:*

"Dear Doctor.—In response to your inquiries, I will state that I was intimately acquainted with Dr. C. W. Long, and was frequently with him after he located in Jefferson, Ga., in the summer of 1840. He often administered the vapor of ether to us young men of the village for the exhilirating effect produced, and he told me that he became acquainted with this property of ether while a medical student in Philadelphia. Upon one occasion, in the fall of 1841, I think, he remarked to me that he thought ether could be used to prevent pain in surgical operations, and that he intended to make the trial at his earliest opportunity. I moved to Athens January 20th, 1842, and introduced the inhalation of ether among the young men in that place. Before this time the practice of thus taking ether was unknown in that section. At

Dr. Long's request, I sent him some ether from Athens in the winter of 1842. Shortly afterward he came to Athens, and told me that he had operated successfully under the influence of the ether.

"These are the facts as I now remember them. Up to the time that I moved from Jefferson, Dr. Long did not have any students in his office. If ether had been employed in sport in the neighborhood of Athens previous to my introduction of it there, I never heard of it. In reaching the conclusion that ether might be used in surgery, I do not think Dr. Long received any outside assistance. In my opinion, the idea was original with him.

"Yours, very truly,

"R. H. Goodman."

The circumstances which led to Dr. Long's first operation are thus described by himself, in a letter to Hon. D. L. Swain, LL. D., June 4th, 1866.*

"In December, 1841, a company of young men were in my office, and requested me to prepare some nitrous-oxide gas for inhalation. I informed them that I did not have the necessary apparatus for making it, but that I had an article which would produce like exhilerating effects, and which I considered equally safe. They expressed a desire to inhale it, and it was administered that night to most of the company. They were so well pleased with the effects that it soon became fashionable to inhale the ether, and I noticed persons while under its influence receive injuries which were sufficient to produce pain, but on inquiring of them if they suffered any pain, they uniformly told me that they had not. I noticed one young man receive an injury of the ankle-joint, which disabled him for several days, and he informed me that he did not feel the slightest pain until the effects of the ether had passed off. Observing these facts, I was led to believe that surgical operations might be performed without pain, and proposed to the gentleman on whom my first operation was done that if he would submit to the operation while etherized, I would charge nothing, or only a nominal fee, for operating."

This operation was for the removal of a tumor from the neck of James M. Venable, March 30th, 1842. A second tumor was removed from the same patient June 6th following.† The last clause in the above letter will explain the following entry in Dr. Long's ledger.

JAMES VENABLE.

1842.		
Jan. 28th.	Sulphuric ether	$ 25
March 30th.	Ether and excising tumor	2 00
May 13th.	Sulphuric ether	25
June 6th.	Excising tumor	2 00

The details of that first operation under ether have been published by both Dr. Long and Dr. Sims. Concerning the subsequent operations, not much need be said.

On *July* 3, 1842, Dr. Long amputated the toe of a negro boy for disease.

On *September* 9, 1843, he extirpated a tumor from the head of Mary Vincent, of Jackson, Ga.

On *January* 8, 1845, he amputated two fingers of a negro boy. The certificates of two witnesses to this operation state that the first finger was removed under the anæsthetic, and that the boy experienced no pain; that the second was removed without ether, and was very painful. It occurs to me that Dr. Long's conduct in this case proceeded either from the fear of keeping the patient under the anesthetic too long, or from a desire to test the action of the ether. The latter view is made plausable from a statement of Long lower down.

If Dr. Long had promptly made public the results of his work, American medicine would have been spared the most tragically interesting chapter in this history. But, under the circumstances, he pursued a course both natural and commendable, and his reasons, as given by himself, were entirely cogent. He knew that he was the first to make the discovery, and he anticipated no controversy. His operations had all been of a minor character, and he only waited for an opportunity to test his anesthetic in capital surgery. But cases of heroic surgery were not common in those days in the practice of a young physician, in a thinly settled community one hundred and thirty miles from the nearest railroad. As far as it went, his work was well known in the small sphere in which he moved. Before me are several certificates—three of them from physicians who were prominent in that section at that time—to the effect that "Dr. Long's operations were public and notorious in and near Jefferson, Jackson county, in the year 1842;" that he "made no attempt to conceal the character of the article inhaled, nor made any request that the results of his operations be kept secret."

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* Dr. Swain was the uncle of Dr. Long's wife, and at the time of this letter was President of the Uninersity of North Carolina.

† These operations were done in the presence of Jas. E. Hayes, A. T. Thurmond, W. H. Thurmond, E. S. Rawls, afterwards a practicing physician, and perhaps others. Certificates of these gentlemen are before me, besides also those of Venable's family.—L. B. G.

Dr. Long's delay in going into print with his cases is thus explained by himself:*

"I was anxious, before making my publication, to try etherization in a sufficient number of cases to fully satisfy my mind that anæsthesia was produced by the ether, and was not the effect of the imagination, or owing to any peculiar insusceptibility to pain in the persons experimented on. At the time I was experimenting with ether, there were physicians high in authority, and of justly distinguished character, who were the advocate of mesmerism, and recommended the induction of the mesmeric state as adequate to prevent pain in surgical operations.† Nothwithstanding thus sanctioned, I was an unbeliever in the science, and of the opinion that if the mesmeric state could be produced at all, it was only in those of 'strong imaginations and weak minds,' and was to be ascribed solely to the workings of the patient's imagination. Entertaining this opinion, I was the more particular in my experiments in etherization."

In the meantime, Wells and Jackson and Morton were at work. With some assistance from one another, they arrived successively at the anæsthetic properties of nitrous oxide gas and sulphuric ether; and Morton, with an eye single to glory and business, secured a patent on ether under the name of *Letheon.* In the Massachusetts General Hospital, Boston, October 16, 1846, Morton admisistered his "letheon" to a patient for Dr. J. C. Warren, and a tumor of the neck was successfully removed. Other operations followed in quick succesion by the hospital staff. They were described in the *Boston Medical and Surgical Journal,* November, 1846, by Dr. Henry J. Bigelow. October 27th, 1846, Jackson and Morton published their letters patent, announcing the discovery of "letheon" as an anæsthetic; but their "letheon" was nothing more nor less than sulphuric ether.

Now began the celebrated "Ether Controversy," which I will pass over rapidly. Wells claimed the honor for himself, but having failed, both at home and abroad, to receive the recognition he sought, he ended his life by suicide Jan. 14, 1848.

When Dr. Long saw that he was anticipated in the matter of publication, he began at once to collect the evidence in proof of his own work. He obtained the affidavits of those operated upon, with dates, the sworn statements of witnesses and of those who knew of the operations, and his first article appeared, with some of these certificates, in the *Southern Medical and Surgical Journal* (Augusta, Ga), Dec., 1849.

In 1852, a bill was introduced in Congress to purchase Morton's patent for $100, 000. This was opposed by Dr. Charles T. Jackson and the friends of Wells. Dr. Long's claims were also presented, and Sims says they were formidable enough to block the movements of Morton to get the appropriation. In 1854, Jackson made a visit to Long in Athens, and having satisfied himself as to the latter's priority in the use of ether, proposed to him (Long) to lay their claims conjointly before Congress as the real discoverers of anæsthesia. At the interview between them, Judge Andrews, of Madison, Ga., was present by Dr. Long's request. Dr. Long declined all of Jackson's suggestions, and instructed Senator Dawson, of Georgia, to make no compromise, but to place his claims solely on their merits. The matter drifted along with true congressional slowness until it was finally lost in the preparations for war. Morton was greatly disappointed at not receiving the reward from Congress. In New York, July 15, 1868, having fretted himself into a congestion of the brain, he drove furiously up Broadway and leaped from his buggy near Central Park. He was taken up insensible and carried to St. Luke's Hospital, where he died an hour later. It was not long before Jackson was committed to an asylum, hopelessly insane. After some years of confinement, he died, August 28, 1880.

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* Extract from an unpublished (?) paper read before the Medical Society of Georgia, April, 1853.

† Dr. Long here refers probably to Dr. Gibbs, of South Carolina, who, at that time, was especially prominent among the class of physicians above alluded to. He, and others, claimed to have "witnessed operations on patients mesmerized and declare that mesmerism was the *ne plus ultra* needed to kill pain in surgical operations."—L. B. G.

The ether controversy was never reopened. Dr. Long continued to practice in Athens, and enjoyed a good patronage. Of course he regretted not having received the recognition he was sure he deserved, but his life was not saddened thereby. In regard to his discovery of anæsthesia, he had often said, "My only wish about it is to be regarded as a benefactor of my race." While on a visit to a patient June 15, 1878, he was stricken with paralysis, and, without gaining consciousness, died the next day. The Georgia Legislature has agreed to place his statue in the National Gallery of Statues in Washington. Dr. Long combined excellently the noblest qualities of the physician with the highest attributes of the gentleman. He knew that the credit of the discovery was properly his; but through all the long controversy he was content to rest his claims on their merits alone, and conducted his case with dignity and honor. He claimed nothing for himself that was not his; his character was known of all men, and was above reproach; he was modest, honest and truthful to the last degree; and he "kept the covenant of his heart's true life till his days were numbered."

Paul found in his travels many altars erected to as many gods, and in Athens another, "To the Unknown God." So the tourist can see, in Hartford, Conn., a bronze statue erected to the memory of Horace Wells; in Mt. Auburn Cemetery, Boston, a marble shaft to W. T. G. Morton; in Paris, a life-size marble statue of Crawford W. Long; and in Boston, a monument of white marble dedicated "To the Discoverer of Anæsthesia." It bears no name, but to one familiar with history it recalls the sad story of hopes that were disappointed, ambitions that were defeated, and lives that were lost, through their connection with the most humane and beneficent discovery of modern times.

Only one word more. Dr. Long's priority in the use of ether is beyond question. His discovery was the logical outcome of certain observed phenomena, and he proceeded to develop it in a scientific way in order to make assurance doubly sure. In the meantime, others less philanthropic gave a patented name to a common article, and, in some haste, announced a great "invention," which, later, they tried to sell for money. But, thanks to Dr. Sims' clear presentation of the evidence, the medical profession generally, I believe, have recognized the precedence of Dr Long's discovery.

It is a little surprising, therefore, that the author of a popular text-book on surgery should say, "I hope I may be pardoned for saying that the evidence in Dr. Long's favor seems to me quite inconclusive." I hope I may be pardoned for reminding him that the blindest persons *are those who will not see.*

A late writer in the *Medical Record* (Jan. 7, 1893) has read history to such little purpose as actually to state that Dr. Long himself never claimed to have "demonstrated painless surgery by etherization." Will the gentleman from New England kindly tell us, what was Dr. Long's object in going before Congress with his case when he saw that others were claiming the credit of the discovery? He might also explain Dr. Long's refusal to accept Dr. Jackson's proposition, and his instructions to Senator Dawson, above referred to.

People, and especially the inhabitants of those cities and sections where new discoveries make late impressions, part with their long-cherished opinions with great reluctance, and then only when the evidence becomes such as to convince the most unwilling. The present instance will be no exception. It is only to be expected, therefore, that there will remain some persons whose understandings will not be enlightened.

THE READING DOCTOR.—The best informed and most successful physicians are those who read the greatest number of medical journals for, in this way, a comparatively small amount of reading suffices to keep them conversant with current medical news and at a trifling cost.

REMOVING ODORS FROM THE HANDS.—A paste of ground mustard and water is a first-rate agent for removing traces of disagreeable smelling substances from the hands, such as salts of valerianic acid, cod-liver oil, etc. Huber claims that any oily seeds when powdered will answer this purpose. The smell of carbolic acid may be removed by rubbing with dampened flaxseed meal.

THE ACTION AND SAFETY OF CHLOROFORM.

H. A. Hare, M. D., and E. Q. Thornton, M. D., present the following summary of the results of their investigations on the subject.

From a careful study of the experiments so far reported, from studies made by one of us two years ago with H. C. Wood, and finally from this careful series of experiments we believe that the subject can be settled by the acceptance of both views in a modified form, or in other words that there is no real antagonism in the beliefs that chloroform kills by depression of the respiration or paralysis of the heart. We very positively assert that chloroform practically always kills by failure of respiration when administered by inhalation, provided, and this provision is most important, that the heart of the anesthetized is healthy and has not been rendered functionally incompetent by fright or violent struggles or, again, by marked asphyxia. By a healthy heart we mean one which has not undergone true fatty degeneration or has not so severe a valvular lesion as to make the slightest variation in the even tenor of the circulation fatal.

As positively as we assert that chloroform kills primarily by respiratory failure, so do we also assert that in excessive dose by inhalation it has a depressant effect on the circulation which is chiefly due to centric vasomotor, depression with final depression of the muscle itself. Depression of the cardiac muscle alone is never great enough to cause death when the chloroform is given by inhalation, but we believe that gradual asphyxia with the direct depression of the circulation may do much towards producing a fatal result, for vasomotor integrity is almost as necessary to life as an intact cardiac mechanism. This circulatory depression has been considered a safeguard because it was supposed to prevent chloroform going to the vital centers, but in reality it is no safeguard because profound circulatory depression is as great an evil as respiratory narcosis. That the circulatory depression may be dangerous is not only evident, but it is stated to be so by the Hyderabad Commission itself at the end of paragraph No. 8. This circulatory depression may be so profound that recovery is impossible, even with the most thorough artificial respiration a fact stated by the second Hyderabad Commission in paragraph 25, which we quote in this paper. This emphasizes the fact that we can not afford to totally ignore the effect of chloroform on the circulation and we can not consider the patient in danger of circulatory failure *only* when the respiration *ceases, but as soon as it becomes abnormal.* On the other hand, we should remember that even if chloroform has been given properly, the arterial pressure may be so low as to give no pulse in the radial artery and yet the circulatory system be ready to respond at once when the drug is removed. If, therefore, the chloroform is properly administered is there danger of its circulatory effect in man? We think that it is just at this point that our research and every other research on animals fails and necessarily fails, to produce a positive reply. The variation in the action of a drug on a diseased individual from its effect on the normal one is notorious, and we have no right to dogmatically assert that there is absolutely no danger of a circulatory depression in man, even if we found no evidence of failure in dogs, because there may be many idiosyncrasies or variations through disease in the human being which may completely reverse the results of experiments on healthy animals.

In other words, supposing that the amount of depression from very full doses of chloroform equals 25 units this amounts to little in the normal heart, but if the heart be depressed 25 additional units by disease the depression of 50 units may be fatal, particularly if to this 50 is added 25 units more of depression through fright and cardiac engorgement through disordered respiration or struggling. That true depression of the heart muscle may take place under chloroform seems to us most undoubted and we think that the tracings in every research that we have seen support this view. There is always a decrease in cardiac power manifested by the decrease in the force of the individual pulse beat and this passes away only if chloroform is removed early enough. We also agree with McWilliams that from the very first inhalation of chloroform there is a constant tendency to cardiac dilatation.

We come finally to all the important questions:

1.—Is chloroform a safe anesthetic?

2.—Are we to watch the pulse or respiration during the use of the drug, and what are the signs in the respiratory function indicative of danger to the patient?

3.—What is the true cause of death from chloroform?

4. Is death from chloroform possible when it is properly administered?

5. Under what circumstances is the surgeon to use chloroform in preference to the less dangerous anæsthetic, ether?

6. What is the best way of administering chloroform?

To the first question the answer is yes, for the majority of cases, provided it is given by one who is skilled in its use and not only knows how to give it but to detect signs of danger. It is not as safe as ether at any time, other things being equal, and never safe in the hands of a tyro.

To the second question the answer is, watch the respiration, *because as soon as enough chloroform is used to endanger the circulation the respiration will show some signs of abnormality either in depth, shallowness or irregularity.* In other words, the very effect of the drug may be to cause such deep and rapid respirations that an excessive quantity of the drug is taken into the lungs and continues to be absorbed even after the inhaler is withdrawn.

As there is always a fall in pressure under chloroform it is difficult to feel the radial or temporal pulse and the respiratory center recognizes the degree of arterial depression, which its sister vasomotor center has permitted by finding that its blood supply is insufficient. As respiration fails first it should be watched first. Finally, it is only by watching the respiration that we can tell how much chloroform the patient is getting. We do not watch this function for danger alone but to tell us of the dose.

The answer to question three is that death is always due in healthy animals to respiratory failure accompanied by circulatory depression, which latter may be severe enough to cause death even if artificial respiration is used skilfully. Death only occurs in the healthy animal when chloroform is given in excessive quantities.

Question four is impossible to answer for man from the basis of experimentation, as we can not produce identical diseased states in animals with those developed under various conditions in man. The physician having a case of heart disease should always advise the patient of the danger of any anæsthetic and he should remember, whether it is wise to tell the patient or not, that anæsthesia always means a step toward death even in the healthiest of men. In the event of a death under chloroform the physician is not to blame if he has taken proper preliminary precautions and given the chloroform properly.

Every one is agreed that the patient taking chloroform should have plenty of fresh air, and in India we understand that to all intents and purposes patients are operated on in the open air, at least as compared to the closed rooms necessary in America and Europe. This free supply of air, is important, whether we believe death to be imminent from cardiac or respiratory failure, but this supply of air matters little to the patient if he does not breathe freely nor does the dose of chloroform amount to aught if it is not drawn into the chest. The dose of chloroform is not the amount in the inhaler but the amount taken into the chest and finally the amount absorbed by the blood vessels. The rapidity and depth of respiratory movements is therefore, as Lawrie asserts, the entire key to the situation. We watch a windmill over a well to see if it is pumping into a reservoir a given quantity of water. If the windmill works irregularly so that we know its pumping action is deranged we separate it from the pump until the wind blows steadily, in order that it may pump regularly. Similarly we withdraw chloroform, as Lawrie says, whenever respiration becomes disturbed in rhythm or when struggling disturbs it, because it is the first indication that the drug's action is uncertain and because there is no telling the dose which is absorbed. While watching the respiration will not warn us of a sudden cardiac arrest in fatty heart plus chloroform depression, neither will the pulse give us such warning and we are confident that the statement of the Hyderabad Commission that the *respiration should be watched is correct,* for we believe from a long series of observations that gradual cardiac failure never occurs without producing respiratory changes from the very first. In other words, we do not believe that in a healthy heart chloroform can cause serious disorder without as a result of beginning disorder disturbing respiration and, second, that in a healthy heart a quantity of chloroform sufficient to disorder it will by its direct action disorder the respiration. If, as an extra precaution, one assistant watches the pulse while the other watches the respiration, very well; for though the respiration is the more important function the man watching the pulse might discover an irregularity which the anæsthetizer may not see reproduced in the respiratory action, but as divided attention generally means a slighting of both objects in view Lawrie is right in insisting on the pulse being let alone.

In answer to question five we have several points to offer: 1. Hot climates where ether is applicable and where a free circulation of air increases the safety of the patient; 2. Chloroform may be used whenever a large number of persons are to be rapidly anæsthetized so that the surgeons may pass on to others and save a majority of lives, even if the drug endangers a few, as on the battlefield where only a small bulk of anæsthetics can be carried; 3. Its employment is indicated in cases of Bright's disease requiring the surgeon's attention, owing to the fact that anæsthesia may be obtained with so little chloroform that the kidneys are not irritated, whereas, ether, because of the large quantity necessarily used, would irritate these organs. Quantity for quantity, ether is, of course, the less irritating of the two; 4. In cases of aneurism, or great atheroma of the blood vessels, where the shock of an operation without anæsthesia would be a greater danger than the use of the anæsthetic, chloroform is to be employed, since the great struggles caused by ether and the stimulating effect which it has on the circulation and blood pressure might cause vascular rupture; 5. In children or adults who already have bronchitis, or who are known to bear ether badly or in other words, have an idiosyncrasy to that drug, chloroform may be employed; 6. Persons who struggle violently and who are robust and strong are in greater danger from the use of chloroform than the sickly and weak, probably because the struggles strain the heart and tend to dilate its walls.

The safest method of administration is by Lawrie's or Esmarch's inhaler because these provide free circulation of air and do not distract the attention of the anæsthetizer from the respiratory movement by complicated apparatus. Apparatus much like these in allowing a free amount of air, are the Hyderabad chloroform inhaler, or open-ended cone with Krohne and Seseman's respiration indicator attachment. The Junker inhaler, even with its modifications, is too complicated and cumbersome and while less chloroform is wasted in administering the drug it must all be thrown out of the bottle afterwards. If used at all it should be used with the increased air supply and respiration indicator of Krohne and Seseman.

We agree so heartily with Lawrie's conclusions that we print them below:

1. The chloroform should be given on absorbent cotton stitched in an open cone or cap. (A depression made through the opening in the inside flannel bag will answer as well.)

2. To insure regular breathing, the patient lying down with everything loose about the neck, heart and abdomen, should be made to blow into the cone, held at a little distance from the face. The right distance throughout the inhalation is the nearest which does not cause struggling or choking or holding of the breath. Provided no choking or holding of the breath occurs, the cap should gradually be brought nearer to, and eventually may be held close over the mouth and nose as insensibility deepens.

2. The administrator's sole object while producing anesthesia is to keep the breathing regular. As long as the breathing is regular and the patient is not compelled to gasp in chloroform at an abnormal rate there is absolutely no danger whatever in pushing the anesthetic till full anesthesia is produced.

4. Irregularity of the breathing is generally caused by insufficient air, which makes the patient struggle or choke or hold his breath. There is little or no tendency to either of those untoward events if given with the chloroform. If they do occur the cap must be removed, and the patient must be allowed to take a breath of fresh air before the administration is proceeded with.

5. Full anesthesia is estimated by insensitiveness of the cornea. It is also indicated by stertorous breathing, or by complete relaxation of the muscles. Directly the cornea becomes insensitive, or the breathing becomes stetorous, the inhalation should be stopped. The breathing may become stertorous, while the cornea is still insensitive. The rule to stop the inhalation should, notwithstanding, be rigidly enforced and it will be found that the cornea always becomes insensitive within a few seconds afterward. It is only necessary to add that the patient should be so dressed for an operation that his respiratory movements can be easily seen by the chloroformist. In the climate of India this is not difficult to manage, but it is rather more so in the climate of Europe ; so that in this respect, and this respect alone, the chloroformist in England and America is placed at a distinct disadvantage compared with the chloroformist in India.

Note.—Since writing this report two important papers upon this subject have appeared in the London *Lancet.* The one by Gaskell and Shore, in which they carried out a line of ingenious cross-circulation experiments, and from which they conclude that the fall in blood pressure seen under chloroform is due to cardiac rather than vasomotor depression ; and another paper published by Lawrie, in the London *Lancet* for February 11, 1893, in which he refutes the statements made by Gaskell and Shore, and details, experiments which he believes combat those of the two investigators just named.

The concluding paragraph of Lawrie's latest contribution to the subject states the facts so clearly and is so in accord with what we have tried to set forth in our own report that we can do better than quote the paragraph:

"The Hyderabad Commission's work proves that, while Syme's principles are right, there is no such thing as a safe method of chloroform administration. It is no longer a question of the superiority of the London method or of the Edinburg method ; absolute safety can be attained neither by watching the respiration nor the pulse for signs of danger—which are in either case proof of improper administration or of overdosing. Moreover, overdosing may take place whether the anesthetic is given on lint or on a towel or on a cap such as we use, or with Junker's or Skinner's or any other form of apparatus. The all-important point is that the breathing shall never be interfered with in any way. Safety under chloroform can unquestionably be insured, but it can only be so by attending to regular natural breathing; and, whatever method is employed, no one can deny that it is the bounden duty of the chloroformist to maintain natural breathing throughout the whole period of administration. To maintain natural breathing requires careful training and considerable experience, but if those conditions be fulfilled it is impossible to produce anything with chloroform but anesthesia; and the Hyderabad Commission has shown that anesthesia alone is entirely free from risk," provided the drug is not pushed too far and that the patient is in ordinary health. We would prefer to make the last sentence read: "Anesthesia can be safely produced by chloroform."—*Journal of the Amer. Med. Ass.*

A Table of Food Values.

Nourishment.	Energy.
1. Corn meal.	1. Corn meal.
2. Wheat flour.	2. Wheat flour.
3. Oatmeal.	3. Oatmeal.
4. Salt cod.	4. Sugar.
5. Beef. (neck).	5. Potatoes.
6. Cheese.	6. Salt pork.
7. Potatoes.	7. Wheatbread.
8. Wheatbread.	8. Cheese.
9. Chicken.	9. Butter.
10. Milk.	10. Beef (neck).
11. Eggs.	11. Milk.
12. Surloin.	12. Surloin.
13. Mutton.	13. Salt cod.
14. Salmon.	14. Mutton.
15. Oysters.	15. Eggs.
16. Salt pork.	16. Chicken.
	17. Salmon.
	18. Oysters.

—W. O. Atwater in The Forum.

Diagnosis of Epilepsy by the Urine.—Dr. Gilles de la Tourrette claims that a diagnosis between hysterical epilepsy and that due to neoplasm can be made by the examination of the urine. He has found that there is an increase in the elimination of urea and phosphates during a convulsion due to a tumor, while the amounts excreted during an attack of hysterical epilepsy are diminished.

HYPNOTISM AND SUGGESTION.

The interesting experiments carried out by Krafft-Ebing, at a recent meeting of the Vienna Society for Psychiatry and Hypnotism, have aroused great interest in scientific circles. The experiments were made with the object of showing that it is possible, by hypnotic suggestion, to transfer persons into a former period of their lives, their mental condition, at the same time, undergoing a corresponding change, and that while in this state nothing is lost to their memories which cannot, by suitable influence, be recalled. The astonishing results obtained with Miss P. by hypnotic suggestion are the more seriously considered, because brought to notice by so learned an observer as Krafft-Ebing. The subject was a woman of 33 years of age. Krafft-Ebing hypnotized her, and transferred her successively back to the ages of 7, 15, and 19, restoring her, after each experiment, to her normal condition. In each case she behaved, spoke, and wrote in a way corresponding to the age which she imagined herself to be. The experiments were received, by the majority of those present at the meeting, with much skepticism. In decided contrast with the opinions of certain psychologists and neurologists, who, while they doubt the genuineness of the three states shown in Miss P. by the demonstrator, still admit their possibility, stand the views of Professor Benedikt, who addressed Krafft-Ebing's hearers in a way quite characteristic of his energetic manner: "Well, the whole thing is a swindle. The possibility that such things may be presented before a scientific assembly, and that they are not at once recognized as a clumsy deception, is accounted for by the fact that the physicians and psychologists present do not possess a true knowledge of humanity, and are unable to make a correct analysis of such proceedings. One of the most interesting subjects of psychology is the fact that intellectual, physically and morally sound women are not those who are fascinating to men, but, on the contrary, the hysterical women; this results from the fact that the hysterical women presents the feminine type, even to the verge of caricature, and, according to the law of contrast, calls forth the admiration of the masculine sex. These hysterical women also have the feminine peculiarity of profiting by the intellectual, moral, or æsthetic weaknesses of the male sex. It is, therefore. a great satisfaction to them to get the better of any enthusiast, 'poseur,' or learned man. When we also consider that idle, lazy members of the higher classes of society require a special science for themselves, which they can pursue without labor or special knowledge, it becomes evident why medical doctrines and occurrences which tickle the fancy and self-sufficiency of these idlers so easily become the fashion. The teachings of Kneipp are naturally more accessible than those of Skoda, and these gentlemen can amuse themselves with all the fantastic nonsense of modern hypnotism and modern suggestion, and look down upon their more-learned fraternity, who do not accept such vague and uncertain theories. I belong to those who have long been occupied with the study of hypnotism, and have used it as a curative agent. If I did not immediately decry the exaggerations originating at Nancy, it was because frequently, in medicine, the truth has only left its impress to posterity clothed in a heavy garb of errors. The phantoms and the humbug pursued for years I have combated with success in Paris, in 1889; in Bournmouth, at the meeting of English physicians, in 1890; and in Brussels, the same year. The misapprehensions into which some noble minds, such as those of Charles Richter and Luys, have fallen stand to-day under the judgment-sword of the scientific world, which not only combats hypnotism, but warns and protects itself against its exaggerations and misuses."

It may be here stated that this form of suggestion is not particularly new. Seven years ago, similar experiments were made in Finland by Prof. Karl Hansen, of Copenhagen, who, later on, also made further experiments of the same kind. Hansen transferred the subject to a period of old age, and it was most interesting to note how the posture and even the facial expression corresponded with the period suggested. In the Paris and Berlin scientific circles the Vienna experiments call forth much ominous headshaking. The opinion seems to be pretty general that Krafft-Ebing has been made the victim of a very cleverly perpetrated deception,—by no means the first.—*Ed. Univ. Med. Jour.*

CURRENT LITERATURE REVIEWED.

THE AMERICAN JOURNAL OF OBSTETRICS for October. Dr. Francis Foerster contributes a paper on

Comparative Microscopical Studies of the Ovary,

the paper in this issue being devoted to the study of the corpus luteum of pregnancy. He sums up the results of his comparative studies on the subject as follows:

1. The corpus luteum is a new formation of tissue, filling the loss of substance after the rupture of a Graafian follicle and fructification of the ovum.
2. In its production not only the wall of the ruptured follicle, but also the tissue of the ovary next to the follicle, and probably the remnants of the follicular epithelium, participate; thus the corpus luteum is considerably larger than the space occupied by the original follicle.
3. The corpus luteum is, in its earliest stages of development, of an embryonal or medullary or indifferent tissue, similar to that of the embryo in the first weeks of its growth.
4. The medullary tissue is the outcome of changes identical with those termed inflammatory. Fibrous connective tissue, smooth muscular fibres and blood vessels break up by proliferation of their living matter, both of the protoplasm and basis substance, into indifferent corpuscles, united among themselves, representing the embryonal tissue.
5. The human corpus luteum of the second month of pregnancy is composed of a lobulated, cortical portion of embryonal and a central portion of myxomatous tissue. The corpora lutea of the sow, the ewe, and the cow are non-lobular and uniform in structure throughout
6. The medullary elements, originally arranged in groups, produce by coalescence large, nucleated, protoplasmic bodies, the lutein or epitheloid cells of authors. They are pigmented by the hemoglobin of the extravisated blood corpuscles first filling the cavity of the ruptured follicle.
7. The large, coarsely granular, protoplasmic bodies should be termed "endothelia," and the tissue building up the corpus luteum "endothelioma"—*i. e.*, myxomatous tissue, in which the protoplasmic bodies persist instead of being infiltrated with basis substance.
8. The tissue of the corpus luteum is similar to that of a granuloma. The former is the result of a physiological, the latter a pathological reparative process. Both are myxomatous tissue.
9. In the corpus luteum the meshes of the myxomatous tissue remain throughout its persistence protoplasmic in the shape of coarsely granular, nucleated bodies, the endothelia. In the granuloma the meshes are soon infiltrated with myxomatous basis substance.
10. In the process of involution of the corpus luteum the endothelia break up into medullary corpuscles, which build up fibrous connective tissue. This process is often, but not invariably, accompanied by the appearance of clusters of hematoidin crystals.
11. The hematoidin crystals have a threefold source; red blood corpuscles contained in partly obliterated blood vessels; small extravasations of blood in the retrogressive changes of the venous and capillary blood vessels of the corpus luteum; and, lastly, the endothelia themselves, saturated with hemaglobin from their very origin.
12. The final result of the involution of the corpus luteum is cicatricial tissue, built up first by myxomatous, later myxo-fibrous, and at last by fibrous connective tissue.

The paper is illustrated by woodcuts of the microscopical appearance of the corpus luteum in the human subject and in animals.

Dr. J. Clifton Edgar presents a paper on

The Mechanism of Labor; Some Experimental and Clinical Observations.

As the result of his investigations he comes to the following conclusions:

1. The chief factor in determining anterior rotation of the lowest portion of the presenting part is the resistance of the pelvic floor.
2. Complete forward rotation of the presenting part is the rule in primiparæ; it often fails in multiparæ.
3. Excessive rotation of the head is a rare condition.
4. A permanent occipito-position is more common in multiparæ than in primiparæ, other things being equal.
5. Complete shoulder rotation occurs with about equal frequency in primiparæ and multiparæ.
6. In primiparæ and spontaneous delivery the anterior and posterior shoulders appear with about equal frequency.
7. In multiparæ and spontaneous delivery the posterior shoulder appears first more frequently than the anterior.
8. In spontaneous delivery the posterior shoulder is born first more frequently in both primiparæ and multiparæ—three times as frequent as the anterior in primiparæ, two and a half times as frequent in multiparæ.
9. The posture of the parturient does not appear to affect the mechanism of shoulder delivery.
10. Manual extraction of the shoulders was found to increase the percentage of perineal lacerations.

Dr. Giles S. Mitchell presents the report of

The Second Successful Cæsarian Section Performed in Cincinnati.

The operator did not flush out the abdominal cavity nor wash out the uterus. In closing the wound in the uterus, only one row of sutures were passed, which went through the peritoneal coat of the wound. The sutures were not passed till firm contraction of the uterus had taken place. The vagina was not irrigated, nor was any drainage tube put into the os, as at the time of the operation there was sufficient dilatation of the os to secure free drainage, since the patient had been in labor for fourteen hours. On the twelfth day the patient had an attack of puerpural mania from which she happily recovered. The patient was allowed to convalesce without any meddling with the lochia or washing out of the wound. The lochia were normal and there was no odor from them.

Dr. Edward Sanders discusses "Chronic Oophoritis and its Treatment by Electricity." The author presents a number of statistics to show the futility of operation in this form of disease, contrasting these with the good results obtained by him from the use of electricity. He concludes "that for the cure of chronic oophoritis there is no remedy now before the profession which is the equal of electricity; the cure being obtained without any risk whatever to the patient, be the case simple or complicated, recent or of old standing, the only contra-indications being the presence of pus, the occurrence of acute peri-uterine inflammation, or the existence of old unyielding adhesions."

Dr. Joseph B. Bacon contributes a paper on the "Relation of Rectal Disease to Gynecology" in which he shows that the cause of pelvic inflammation often lies in ulceration of the rectum and urges that if the gynecologist would more thoroughly examine the rectum in those cases of pelvic abscess so intimately adherent to that organ that it is impossible to remove the sac without making a fistula, he would find, on looking up the history, that many of the cases originated from ulcers of the rectum.

Other papers in this issue are: "The Present position of Pelvic Surgery," by Dr. L. S. McMurtry; "The Relation between the Eyes and Diseases of the Female Genital Organs," by Dr. Boerne Breetman; "Five Cases of Laparotomy," by Dr. Lucy Waite; "A New Pelvimeter," by Dr. James B. Bullitt; and "The Removal of the Ovaries and Tubes in the Insane and Neurotic," by Dr. Archibald Church, a notice of which has appeared in THE MEDICAL AND SURGICAL REPORTER, for August 5th, 1893, page 227.

THE VIRGINIA MEDICAL MONTHLY

for October. Dr. John N. Upshur discusses

The Therapeutic Application of Chloroform in Labor.

He claims that chloroform diminishes the excitability of the muscular system and its capacity for work. If prolonged, it exhausts muscular irritability, it interferes with oxidation of the blood, and thus becomes toxic to the fetus. Its stimulant action on the vaso-motor center is doubtful. The indications for its use are in those cases where the pains are nagging and exhausting, in rigid os and in great nervousness and restlessness. The author believes that it should not be administered until the second stage of labor is well established (except in cases of rigid os), and at the latter part of that stage, and withdrawn as soon as the occiput has passed the ostium vagina. He considers that by the use of chloroform the uterus is left in such condition as to make subinvolution, with all the ills that follow in its train, almost inevitable. The spongy condition of the womb makes the patient much more liable to septic infection. By its use labor is often suspended, nor on the withdrawal of the chloroform will the pains return with desirable efficiency and instrumental delivery may be made necessary. The interference with the oxidization of the blood endangers the life of the child and he asserts that its use in natural labor increases the per centage of stillbirths. It is a question if death of the mother occuring within twenty-four hours after delivery, and reported as heart-clot, etc., may not have been due to the depression from too long continued administration of chloroform, plus the shock of labor. The author would lay down the proposition as an axiom, that whenever chloroform has been administered, a full dose of ergot should be given as soon as the head is delivered, or the second stage of labor complete. He would also suggest that it is a safe practice to give a full dose of quinine (gr. x) at the beginning of the second stage of labor when chloroform is exhibited, or belladonna, or one or more doses of nitroglycerin; especially will this last tend to antidote the nausea following chloroform administration. The hypodermic injection of atropine (gr. $\frac{1}{120}$) or sulphate of strychnia (gr. $\frac{1}{60}$) will undoubtedly add to the safety of the patient.

We must not lose sight of the fact that in the obstetric use of chloroform (which is usually conceded as the safest field for the use of chloroform), the patient is much longer under the influence of the anesthetic, and that the stimulus of constantly recurring uterine contractions, of a painful character, which are supposed to antidote the ill effects of the chloroform by constantly arousing the patient, may be absent or fail to exercise the stimulant effect usually a consequence of pain. The author urges that chloroform be placed on the same platform as other drugs and not be administered unless the indications of the case demand it.

Dr. Victor C. Vaughn contributes a paper on

The Causes of Typhoid Fever.

The author believes that there are many several germs that may cause ulceration in the intestines and an elevation of temperature in the lower animals. The germs obtained from the spleens of persons dead from typhoid fever, in this country at least, do not show uniformity in growth. For the last twelve or fifteen years the author has been called upon officially to investigate nearly every epidemic of typhoid fever which has appeared in the state of Michigan. In all cases the water supply has been examined, and during the last four years this examination has included a thorough bacteriological study. In no case has he been able to find in the water a germ wholly identical with that of Eberth. During the last year he has in each epidemic obtained the spleen of one or more persons whose death was caused by the fever, and in this organ he has found germs identical with those found in the water but not identical with the Eberth germ.

Dr. Reginald H. Sayre furnishes

A Contribution to the Study of Club Hand.

The paper is an abstract of that read by the author at the Pan-American Congress. Club-hand, he states, is very much less frequent than club foot. It may be acquired as a result of paralysis of certain muscles, or contraction of others from central nervous irritation, by cicatrices resulting from burns, or it may be due to injuries to the bones of the hand or fore-arm, or it may be congenital.

The congenital club-hands may be divided into three varieties:

1. Those where the skeleton is complete and well formed;

2nd. Where the skeleton, is complete, but ill formed.

3rd. Where the skeleton is incomplete and distorted.

Various writers say that the majority of cases come under the third head but the author's personal experience does not agree with this. In many cases club-hand is associated with club-foot or some other abnormality of development. The direction of the deformity may be either in flexion, extension, abduction or adduction or a combination of the two, the most frequent being the radio-palmar variety.

In those cases where the all the bones of the hand and fore-arm are present, the prospect of a good result are more favorable than where there is absence of one or more bones; and in these milder cases, when seen early, it is sometimes possible to restore the hand to proper shape and function by constant manipulation and rotation of the parts, which are to be held in their improved position by some fixed dressing, as the plaster-of-Paris bandage—the dressing being changed from time to time as the deformity is reduced.

Section of the tendons, ligaments or fascia may be necessary, if the case is not seen in the early stages. Many of these structures are so situated as to make open section preferable to the subcutaneous method; and if the flexor tendons have to be divided, it would seem better to operate in the fore-arm instead of the hand, and to split the tendon longitudinally, and after having gained such additional length as was needed by sliding the ends past each other, to suture them together once more.

Dr. Charles G. Cannaday contributes an article on "Subinvolution of the Uterus, and Its Treatment by Electricity" urging its use in this disease and stating that the trouble can be cured in one half the time required by other methods of treatment.

Dr. Luther B. Grandy furnishes an interesting article entitled "A Contribution to the History of the Discovery of Modern Surgical Anæsthesia," presenting some new data relative to the work of Dr. Crawford W. Long, whom the author regards as the real discoverer of the anæsthetic properties of ether.

Under "Clinical Reports," Dr. R. K. Smith contributes an interesting report of

An Atypical case of Cerebral Meningitis.

In this case the respiration failed thirty six hours before the heart ceased to beat; artificial respiration being kept up during this period.

The special features of interest in this case are: First. The mild symptoms—*i. e.*, the noticeable absence of pain until the day that he became unconscious; photophobia, delirium, muscular contractions, etc. etc.

Second. The sudden loss of consciousness and the high elevation of temperature at the same time; and then the rapid fall of the temperature.

Third. The cessation of the respiratory act while the cardiac function remained unimpaired for quite a while.

Fourth. The length of time his heart continued to beat after the normal respiratory act had ceased, which was thirty-eight hours and thirty minutes, during which time artificial respiration was performed. If the respiratory act was withheld, the surface would gradually get darker in color; the heart faster and weaker.

Fifth. The suspension of action of all the reflex centres, both cerebral and spinal, with the exception of the vaso-motor, cardio-inhibitory (?), vesical, and rectal.

The remaining papers in this tissue are: "Personal Experience in observing the Results of Good and Bad Sanitation in the Confederate States Army," by Dr. Bedford Brown; and "The Use of the Catheter During Labor," by Dr. R. A. Lancaster, in which the author urges the use of the catheter as a routine practice at beginning of the second stage of labor.

Extirpation of the Wounded Spleen.

Riegner (*Berliner Klinische Wochenschrift,*) reports the following interesting case: A boy, fourteen years old, fell from a high scaffolding, striking upon the abdomen. When seen the patient was extremely pale, and was vomiting a brownish fluid. The abdomen was markedly distended and very tender, and there was retention of urine. Rupture of one of the large abdominal viscera being suspected, laparotomy was performed, notwithstanding the shocked condition of the patient. The spleen, which was found completely torn through, was removed after ligation of the vessels. Two sub-cutaneous injections of 300 grammes of a 0.6 per cent. solution of sodium chloride were administered. Twelve days after the operation the sutures were removed. Several weeks later it was found necessary to amputate the left thigh for gangrene, but despite these two severe operations the patient recovered. At the present time there is a general enlargement of the external lymphatic glands, and also enlargement of the mesenteric glands. It would, therefore, appear as if the lymphatics had assumed the function of the spleen. The relation of the white to red corpuscles was at first 1:100; the absolute number of the red corpuscles rapidly increased up to normal; that of the white corpuscles did not decrease.—*Univ. Med. Mag.*

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

MEDICINE

Enchondroma of the Mammary Gland in a Bitch.

At a recent meeting of the Montreal Medico-Chirurgical Society, Dr. Adams brought before the Society a case of this condition on account of its rarity. Enchondroma has been very occasionally reported as occurring in the female, perhaps more frequently in the domestic animals. The present specimen, a bullet-like growth two and one-half inches in diameter, was obtained from a setter bitch. The growth would seem to be of less than a year's duration, and to have originated after a rather severe mammits. The bitch had a litter of puppies in February, 1892. There was some difficulty about the weaning and one of the teats became injured and inflamed. The bitch recovered, but in the autumn a small lump was observed in the previously injured teat. It was removed at the beginning of last month.

The structure of this tumor is typical, it is slightly lobulated, and the center is of bony hardness. Sections showed the lobules towards the periphery to be of hyaline cartilage, with some regions presenting stellate cells and less dense matrix; they were separated by bands of fibrous tissue. Deeper down the matrix became impregnated with calcareous salts, but even at the center there was not true bone. There were large channels in which ran the blood vessels surrounded by loose cellular structure, but the surrounding osteoid framework possessed neither proper Haversian canals or true lamellæ. Langlois, in the *Dictionnaire des Sciences Medicales*, gives a good account of these mammary enchondromata.—*Montreal Medical Journal.*

The Hereditary Transmission of Immunity Against Rabies, from the Father to the Offspring.

Tizzoni, Guido and Cetanni, Eugenia (*Centralbl. f. Bakt. u. Parasik.*) These investigations were made with the express purpose of determining the transmission of immunity by the semen of the father to the offspring The results were as follows:

(1) The father can transmit acquired immunity against rabies to the offspring through the semen.

(2) This occurs without any peculiar influence on the part of the mother, as the father can transmit the immunity to the offspring of different mothers.

(3) The immunity thus transmitted extends equally to all the progeny.

(4) The immunity of the young is less than that which the father possesses.

(5) The immunity transmitted through the seamen is permanent, in distinction to that acquired through milk or injected blood, which is transitory.—*Univ. Med. Mag.*

The Preventive Treatment of Tetanus.

Simmons says it is best to kill the tetanus bacillus while they are yet confined to the point of introduction. The following procedure is recommended in all cases of punctured wounds: All foreign substances are removed, and the wound thoroughly cleansed. With a gold hypodermic needle and an ordinary syringe he injects into the wound, if painful or sensitive, a 4 per cent. solution of cocaine, which is allowed to remain until its full effects are produced. He then draws out what may remain within the wound, and with the same instrument injects the following:

℞	Nitrate of silver	grs. v.
	Water	f ℥ ss.

Or

℞	Corrosive sublimate	grs. ij.
	Carbolic acid	grs. xv.
	Alcohol	f ℥ ss.

Internat. Jour. of Surg.

The Advantages of a Physician Dispensing His own Medicine.

1. To make a physician more independent.
2. On account of the habit of substitution prevalent among certain druggists.
3. To make sure of exhibiting pure and fresh drugs.
4. To prevent refilling of prescriptions without the physician's knowledge.
5. To show his disapproval of the practice of counter prescribing and the selling of patent medicines.
6. To centet the pecuniary profits upon the physician.
7. To assure cleanliness in the preparation of medicines.
8. To educate the doctors to practical pharmacy.
9. To inspire confidence in the patient.
10. To check the growing use of proprietary medicine by the profession. Dr. Storrs. —*Medical Age.*

Calomel Soap in the Treatment of Syphilis.

Watraszewski (*Ann. de Derma. et de Syphil.*, 1893) describes the preparation of the soap as follows: The calomel, in the form of vapor, is mixed with a potash soap, in strength of one to two and one to three. It forms a soft mass of a white color.

From two to three grammes of the soap should be rubbed in every day.

The inunctions should be carried out in the following manner: The parts to be rubbed should first be washed with ordinary soap and water, and the patient then having taken a bath, the soap should be applied and rubbed in with a rotary motion of the hand for from ten to fifteen minutes.

The advantages claimed for this method of treatment are as follows:

1. Its application takes but little time.
2. The soap is odorless and colorless, and it does not soil the linen.
3. The inunctions never irritate the skin, except when applied too often in the same region.

The rapidity of cure corresponds in time to that resulting from the use of blue ointment.

Treatment of Infantile Convulsions.

M. Jules Simon advises the following method:

1. Relieve the digestive organs by a laxative, or by tickling the throat until vomiting occurs.
2. If the attack continues, give ether or chloroform by inhalation.
3. Administer within twenty-four hours the following anti-spasmodic mixture:

℞	Chloral Hydrate	aa gm. 1
	Bromide of Potash	
	Syrup of Codeine	gtts 10
	Tincture of Musk	
	Tincture of Aconite Root	gtts 10
	Orange flower water	gm 100

4. If the attack is grave and prolonged, place the patient in a warm bath, and apply, with suitable antiseptic precautions, a small blister to the back of the neck, or to the epigastrium, leaving it in place not longer than three hours. As soon as vesication is established, substitute a poultice for the blister.—*Union Medicale.*

The Mechanical Treatment of Locomotor Ataxia.

Hirschberg (*Bull. Gen. de Therapeutique,*) couludes as follows with regard to the utility of Fraenkel's plan of treatment of locomotor ataxia:

1. It is possible to greatly improve the ataxic movement in tabetics by the method of Dr. Fraenkel.
2. The gymnastic exercises explain the reason of augmentation and development of muscular force in the affected members.
3. The exercises in making the muscular contractions under the control of the will of the patient ameliorate the inco-ordination.
4. In bettering the *morale* of the patient by giving him more confidence in his extremities, the persistent ideas of pathophobia which cause so much misery in tabetics are dispersed.
5. The treatment is indicated in all stages of locomotor ataxia. Best results, however, are obtained when it is instituted before locomotion becomes completely impeded.
6. Treatment is contra-indicated when the course of the disease is very rapid; that is to say, when the clinical picture is completely developed in less than two years; also, when the general condition of the patient is particularly bad, and especially when the articulations are affected.
7. The treatment does not exercise any influence on the cardinal symptoms of tabes dorsalis, with the exception of the ataxia.

It might be said that Fraenkel's treatment in principle distinguishes three categories of movements:

1. Simple muscular contractions; that is to say, of one muscle or a physiological series of muscles.
2. Simple co-ordinate movements; for instance, touching the end of the nose with the index finger.
3. Complex co-ordinative movements, such as writing.

In applying the treatment, the practice is to begin with the simpler passive movements, then gradually assume the more complex.—*Jour. Nerv. and Mental Dis.*

Ord (W. M. and White (E.) on Certain Changes Observed in the Urine in Myxœdema after the Admistration of Clycerine Extract of Thyroid Gland.

From a careful study of a case, the following deductions are made:

1. That the urine is increased in volume.
2. That the nitrogen excreted in the urine exceeds the total quantity of nitrogen in the food.
3. The phosphoric acid and chlorine eliminated are practically unaffected.
4. That the increased nitrogenous excretion is chiefly in the form of urea.
5. That the body weight is rapidly diminished.
6. That the temperature of the body is raised.—*Brit. Med. Jour.*

Uffelmann (J.). Can Living Cholera Bacilli be Carried with Dust through the Air?

Thin layers of finely powdered garden-earth, fine white sand, street- and floor-sweepings, and mixtures of dust and diarrhœal discharges, were moistened with cultures of cholera bacilli. They dried in fourteen to sixteen hours, and were then pulverized. At various intervals of time cultures from these mixtures were obtained by inoculation and by allowing the dust disturbed by being blown upon to settle on gelatine planes. The results of all the experiments were the same. While the bacilli died rapidly during the process of drying, some of them were still alive after the lapse of twenty to twenty-four hours, if sun-light were excluded, were carried about with the dust, and developed colonies. As an exception solitary bacilli survived three days. The lesson is clear. Although the slight liability of the materials soiled by choleraic discharges to the formation of dust, and the rapid death of the bacilli in drying substances (materially hastened by the action of sunlight), render the propagation of cholera in this mode exceptional, it is, nevertheless, possible for living cholera bacilli to be carried with dust through the air, and to infect food, water of streams, etc., or to enter our mouths.—*Berliner klin Wochens.*, June 24, 1893.

SURGERY.

Ingrowing Toe-nail.

Dust over the granulations at the bottom of the sulcus with aristol or iodoform and on top of this put a small piece of lint or cotton.

Take a piece of rubber bandage one-half inch wide and twelve to fourteen inches long and, if it is the inside of the toe that is affected carry the bandage over the nail toward the inflamed structure. This, as you will observe, will have a tendency to carry the mass away from the nail. Beginning at the extreme end of the toe, carry the bandage back, with such pressure as the patient can comfortably stand, until the whole area of inflammation is included. Fasten it by means of a light gum band or tapes fastened to the end of the bandage.

The patient is then able to attend to his ordinary duties. The bandage can be removed at night and re-applied by the patient himself, if desirable, the first thing in the morning.—*N. Y. Med. Times.*

GYNECOLOGY.

Ludlam on the Physiological and Morbid Relations Existing Between the Uterus and the Eye.

Janot's work is based on the following conclusions:

1. Certain ocular troubles exist in relation with different physiological and pathological conditions of the uterus.
2. In order to institute an efficacious treatment it is important to establish their origin.
3. These ocular lesions are much more tenacious when the uterine troubles have persisted for a long time.
4. In a large share of cases they are attributable to infection.
5. The treatment should be addressed to the local condition of the uterus and the vagina, to the local state of the eye, and to the general condition of the patient.—*N. W. Med. Times.*

Report of six Consecutive Cases of Extra-Uterine Pregnancy. With a Clinical Report of four Additional Cases, Dr. Hall offers the Following Conclusions.

1. All cases of intra-peritoneal rupture of a tubal pregnancy are not followed by marked collapse, and this fact should not be overlooked and thus a mistaken diagnosis made.
2. If the rupture takes place in the early months of gestation and does not immediately prove fatal, the patient may, and frequently does, improve, and all of the symptoms disappear for a week or more, until another hemorrhage takes place; and this may occur several times.
3. All cases of tubal pregnancy should be operated upon at once after the diagnosis is made.
4. The operation is not a dangerous one, and, if made early, before the patient is exsanguinated, the prognosis is as favorable as many other abdominal operations, and much more favorable than by any other method of treatment,—*Cinn. Lancet Clinic.*

Menstruation in a Child Aged Six.

Jacobvitch (*Nouv. Arch. d'Obstet. et de Gynec.*) related this case before the St. Petersburg Society for Diseases of Children. At the age of three she was brought to Jacobvitch for hemorrhages. The genitals were normal. A considerable amount of a milky fluid exuded from the breasts, which were of the size of hen's eggs. The child is now over six years of age. She menstruates several times yearly, especially in summer. The period lasts from three to four days. Before the catamenia the child becomes ill-tempered; afterward she has headaches with vertigo. She is very anemic. The breasts are as large as small oranges; the labia minora and clitoris slightly hypertrophied.—Boston *Med. and Sur. Jour.*

OBSTETRICS.

The Influence of Treatment of a Syphilitic Mother, Especially During Pregnancy, on the Health of the Infant.

Etienne draws the following conclusions from the study of thirty-two cases of pregnancy in syphilitic women:

"1. The fetal mortality, in cases in which the mother has been treated, is enormous, reaching 85.5 per cent. If treatment be applied throughout pregnancy, we may hope to obtain almost complete immunity from this infant mortality.

2. Syphilis attacks the fetus especially during the fifth, sixth, and seventh months of intrauterine pregnancy.

3. Paternal syphilis is less injurious to the fetus than maternal syphilis.

4. The prognonsis differs according to the stage of pregnancy when the mother becomes contaminated.

(*a*) If infection occurs during the first three months, and is not treated, the mortality during the first few days after delivery reaches one hundred per cent.

(*b*) The prognosis is a trifle better, if infection occurs during the fourth and fifth months.

(*c*) In one case of infection at the eighth month, the child lived and was apparently healthy; in a second similar case the child was in good condition at birth, but developed symptoms of syphilis later.

(*d*) Whenever suitable treatment was administered, the mortality was *nil.*

(5) In no case were any unfavorable results met with from internal medication during pregnancy."—*Amer. Jour. Obst.*

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ORIGINAL ARTICLES.

PROBLEMS OF PUBLIC INTEREST CONCERNING THE INSANE.*

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There are several problems of public interest involved in the present relations of society to the insane. Among the more important of these are questions of dependency, of curability of the insane, and of the preventibility of insanity.

Each of these questions presents two aspects for consideration—one appealing to whatever altruistic sentiment may have been developed with our growth, and the other to that selfish sentiment that is common to the race.

That there is a large number of insane persons, increasing rather than diminishing, in every civilized state, is a fact familiar to all intelligent interested observers.

That the insane constitute a dependent class of society is equally apparent.

Independence implies mental capabilities corresponding to impending necessities under any given circumstances. But few living beings are superfluously endowed for the end indicated. A large proportion of animal, as well as vegetable, specializations entering life upon terms of apparent equality, die prematurely because of inherent lack of capability to meet or resist the exigencies of environments.

The complex environments of civilized life require much greater capability on the part of individuals to maintain independence than are required by the more simple conditions of savagery.

Insanity implies mental impairment, hence lessened capability, noticeable as contrasting previous conditions manifested by the persons supposed to be insane.

Liability to become insane under ordinary provocation, is associated, as a general rule, with inherent defects of organization characteristic of a class of persons whose natural capabilities are below a common level at, or even above, which independence implies constant, anxious and often unsuccessful effort. A slight degree of impairment, therefore, may be sufficient to reduce a self-supporting person to a condition of dependency.

That exceptional persons of more than ordinary capability have become insane under exceptional circumstances—or that rare instances of exaggerated capability associated with some degree of mental disorder, have been observed—when properly considered should not discredit the foregoing statement or inferences.

It is true—if mental phenomena are sequential to cerebral activities orderly and disorderly, and reflect cerebral conditions sound and unsound—that it must be possible for whoever or whatever is endowed with brains to become insane under sufficient provocation. Fortunately for most of us, however, ordinary provocation is not sufficient to seriously derange the mental mechanisms of a large majority of mankind.

Neither should the fact that a considerable number of active and apparently capable, business men suffer and are destroyed by what is now familiarly known as 'paresis,' affect the position taken unfavorably. Clinically considered, in the sidelights of commemorative circumstances, these men are found to be not exceptional persons—but belonging to a class not only liable to become insane because of inherited peculiarities, but constitutionally prone to indulgence in practices more than ordinarily provocative of cerebral disease.

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*Read before the Mississippi Valley Medical Association, October 4, 1893.

Degenerative impairment—hence incapability of self-support—on the part of the insane being admitted, the question of public interest is: What shall be done with and for them? All savage peoples aid and abet Nature in her methods of disposing of the defective and incompetent, in all of her kingdoms, by neglects and practices quite as cruel as her own. Our own ancestors were not exceptional in this respect.

Among civilized peoples it has come to be recognized as expedient and dutiful for the strong of our kind to succor and sustain the weak, no matter what the burden may be. Why this is or how it came to pass, need not be discussed in this connection. Enough to say that it is an 'inevitable sequence of antecedent conditions;' that the duty is clear and will never more be shirked while our people advance along the lines of christian civilization. It is our privilege, however, to consider 'ways and means' for the accomplishment of this end in a severely practical light. The problem then is: how shall this recognized obligation be discharged with the least expense to ourselves?

This depends, of course, upon the kind of provision for the dependent insane demanded by our sense of duty enlightened by sympathy as well as intelligence. What shall it be? Not such as was extended to the insane of all christian lands from the accession of Roman ecclesiasticism in Europe to the close of the eighteenth century! O no! Not even such as was considered satisfactory in the earlier decades of the present century! Not by a long way! Public sentiment now demands for the dependent insane not only custody and treatment, but provision for all the privileges and comforts of life that they are capable of enjoying. And this is right. Nothing could be more just or humane; nothing easier of accomplishment: provided the accomplishment be referred to agents sufficiently instructed and informed of the various degrees and peculiarities of capability for enjoyment of the different classes of the insane, instead of to the conceited zeal of public ignorance, however well intended. Public ignorance and mis-information respecting insanity and the insane, have given rise to nearly, if not quite, all of the fadulent notions that have made themselves known by endless clamor respecting public provision for the insane of late years—wearisome enough to well-informed listeners, if not altogether unprofitable.

It has not been the purpose of the writer in preparing this paper to renew or continue the discussion of definite 'propositions' for the proper care of the insane, including location, buildings, organization and management, etc., of public hospitals or asylums, further than to submit a brief resumé of conclusions reached, or opinions entertained, after the experiences of twenty-five years service as superintendent of large and small, public and private hospitals for the insane, and interested studies of the characteristics, capabilities, and needs of various classes of dependent persons.

These conlusions have been summarized as follows:

(1), Intelligent provision for the insane implies provision for various classes, according to capabilities of enjoyment, and the exercise, under intelligent supervision, of variously impaired faculties.

(2), Public provision for whatever class of insane persons implies: housing, clothing, feeding, sanitary and moral discipline, amusement and employment for such as are capable of being amused or employed, and medical treatment for the sick: the essential features of such provision being, so far as may be practicable under given circumstances, adaptability to the needs of each distinctive class.

(3), Great, expensive, architecturally-imposing palaces, providing alike for all classes, however serviceable they may have been, æsthetically considered, in times past—as they unquestionably were—are no longer necessary nor appropriate for the ends indicated. Yet, so the insane are comfortably housed, each class according to its condition, it is comparatively unimportant whether they be so in large or small houses; cottages or palaces;

connected or detached; high or low buildings.

(4), It is important that the insane of all classes be well fed under careful supervision; but whether in large or small dining rooms, by groups, or aggregations, is of so little consequence that it should be a matter of convenience rather than of principle.

(5), It is important that public institutions for the insane be well-organized and administered; but whether by three or thirty trustees is a matter of but little moment. Partisan, or bi-partisan boards of directors, may be equally good or equally bad. The fewer statutory details for the government of such institutions the better. Good men will govern a hospital well under adverse statutes, and bad men will manage to evade the wisest legislation. The usefulness and reputation of a hospital for the insane will reflect the characteristics of those who direct or administer its affairs, rather than the laws by which they are authorized to act, or the political party to which they belong.

(6), It is wise to retain in office capable men, who have demonstrated their fitness by successful management of affairs, so long as their capability continue to be elastic; but the displacement of officials whose ideas have become insoluble by competent and still growing men, with or without special training, should not be regarded with alarm nor as of doubtful propriety. Capability without experience is more valuable than experience without capability in any executive position. Whatever ills attend 'rotation in office' in this country, a custom essential to the vigor if not the existence of partisan organization, without which republican government would degenerate—are among the evils compensated by the good of almost unlimited freedom. The trend of human progress is not seriously deflected thereby.

ARE THE INSANE CURABLE?

That insane persons, in some instances, recover normal capabilities after impairment and disorder, is not a question but a fact. Whether or not such persons are greatly, or to any extent, aided to recover by what is done for them by public provisions for their treatment, is a question. How shall it be answered? There is no existing source of accurate information on the subject. Whatever answer is made must, therefore, be inferential and a matter of opinion only. There is a prevalent notion, whether well or ill founded, that the chance of recovery for an insane person is much enhanced by commitment to a hospital for treatment. A notion that emanated, probably, from general practitioners of medicine, who, as a class, are only too willing to escape the responsibility and annoyance of treating insane persons under ordinary circumstances; and has been confirmed by the claims of distinguished specialists administering the affairs of stately institutions, by which their occupation and pretensions have been greatly dignified.

As an economical problem it would be well to know more about this matter than is now known. If any considerable number of insane person are curable or will recover under hospital treatment, that would not recover otherwise, then it is a matter of economy on the part of the state to provide for such treatment, at an expense to be measured only by results. If the average life of a dependently impaired insane person is twelve years, and the average duration of disease of such as recover is one year, then the state can afford an extraordinary expenditure for the cure of the curable, as each recovery represents a saving of eleven years of maintance of an unrecovered person. It is not necessary to make more definite calculations; what we need to know is that the insane are amenable to treatment. That a large proportional number of insane persons are not curable, or recoverable under any known circumstances, can not now be denied in the face of facts the significance of which admits of but little question or modification. Men of experience and capability in the specialty to-day smile interrogatively or with incredulity at the pretensions of cure made by their not very remote predecessors in charge of hospitals for the insane. Statistics of hospitals, inconclusive as they necessarily are on most subjects requiring accurate and comprehensive information, are particularly so in relation to the question under consideration. Hospital authorities in bad repute because of their defects of construction and administration, sometimes exhibit a larger percentage of 'cures' than do the most reputable.

My belief, based upon observed facts

and rational inferences, is that no insane person who is not spontaneously recoverable under ordinarily favorable circumstances is curable by extrinsic influences of any kind. No insane person whose mental impairment is sequential to structural changes of tissues immediately implicated in the performance of mental functions, if of a pathalogical character, is spontaneously recoverable under any circumstances. By recovery I mean perfect restoration of normal conditions; not a partial restoration that may pass for 'cure,' that is after all, but repair.

Cicatricial tissues are always less complex, hence less capable, than the tissues which they replace in the process of reparation. Tissues by which lesions of continuity of skin or muscular fibres are repaired, are familiar examples of this law. It is not probable that brain-tissue is exceptional or exempt from so uniform a physiological process.

Recoverability from insane conditions is, therefore, limited to persons whose mental impairment is attributable to lesions of other than cerebral structures, whereby the brain may be temporarily deprived of its ordinary pabulum or supplied with vitiated nutriment, without impairment of its structural integrity; and 'curability,' is limited to such persons of this class as require the aid of more favorable circumstances than their ordinary environments supply or their means may command, to enable them to resist or overcome these conditions.

The problem of public interest in this connection then is:—has public provision for the insane furnished—can it be made to supply—essentially more favorable conditions for the recovery of the recoverable, than, as a rule, they otherwise enjoy?

That this question should be answered affirmatively I have no doubt.

Concentrated efforts therefore, should be made, backed by liberal expenditures and intelligently directed toward the creation of environments in every way conductive to the recovery of the recoverable: while provision for all other classes should be made with reference to their individual welfare and the utilization of such remnants of capability as they may be still possessed of, at the least reasonable expense.

It may be inferred from the foregoing that the writer does not estimate medicine as the most important factor in the problem of curative conditions for the insane. If by medicine is meant the administration of drugs or chemicals, the inference is a fair one. The insane can be medicated elsewhere as well as they can be in hospitals or asylums.

Hospital physicians have no mysterious knowledge of medicine—no specifics—no secret remedies.

Hospitals for the insane under the exclusive control of Doctors of Homeopathy, claim larger percentages of cure than do similar institutions administered by Doctors of Medicine.

The administration of medicine or the appearance of medicine, may still be wise, being responsive to the necessities of the multitudes who have not yet fully emerged from the shadows of primitive superstitions, nor so far departed from ancestral types as to be uninfluenced by the fetisch feeling that is common to the race, forever suggesting supernatural beings, designs. powers, activities and virtues in association with natural objects in explication of natural phenomena. There are material medicines, also, that are neither poisonous nor inert, that in the hands of skillful physicians contribute, unquestionably, to conditions essential to recovery, as above indicated. Medicines that can not be well omitted in the treatment of the insane under the most favorable circumstances. But these are not, or need not be, many—nor should too much dependence be placed upon their efficacy to the neglect of other and more important measures.

There are other uses, also, to which medicines are now being liberally appropriated in the treatment of the insane, that if not curative of those to whom the medicines are administered, are comforting to others with whom they may be necessarily associated—securing for the time-being silence and languor instead of raving and violence; and at the same time enabling the management to assure an admiring public of the fact that all restraints have been abolished from the hospital under their control, and the greatest reformation of the age has been accomplished by their benevolence and sagacity!

There may be wisdom in such an appropriation of means; knocking the insane down with chemical clubs and paralysing them with poisons instead of limiting their movements by camisoles or protection beds;—but if so, it is wisdom of a kind unknown to my philosophy. There may be virtue in the practice—but if so, it must be of that kind that is said to be its own reward!

If the conditions favorable to the recovery of the recoverable insane do not consist of special medication or mysterious methods of treatment peculiar to hospitals for the insane—of what then do they consist?

They consist, in the first place, of the authority vested in or assumed by such institutions to control the conduct and prescribe the modes of living of the insane committed to them for custody and treatment. Secondly—notwithstanding the fad of the foolish that hospitals for the insane should be made as 'home-like' as possible—they consist of better sanitary surroundings, appurtenances and observances—in but few respects 'home-like' to the greater number of dependent insane persons to be benefitted thereby.

Third—not greater skill in medicine, but more knowledge of the insane on the part of doctors and nurses than is common to the profession—hence more rational treatment.

This is all! But indeed, this is much when considered in contrast with the ordinary home surroundings, modes of living and methods of dealing with the insane, characteristic of the population from which the insane are, for the most part, derivable.

These conditions well provided for, all the rest—minor matters about which so much babble has been heard, of mere 'annise and cummin' importance in hospital affairs—however interesting to persons incapable of appreciating weightier matters may safely be permitted to take care of themselves.

IS INSANITY PREVENTABLE?

Theoretically—yes! Practically—no! Theoretically, insanity is preventable—because so many of the so-called 'exciting causes' of insanity, in an ideal state of society would either not obtain or would be prevented. Practically, insanity is not preventable—because, human nature being as it is, an ideal state of society cannot be effected by any means at our command; nor otherwise than by the slow, however continuous, process of growth.

There are persons it is true, many and worthy in their way, who think otherwise and devote their energies persistently to the accomplishment of such ends. Persons who seem to be exceedingly sensitive to special objects but oblivious to the great fact of a Universe. Persons who interest themselves deeply in special subjects but fail to recognize the more important relations of parts to aggregates, or of generals to particulars, without which knowledge is of but little value. Persons who think, if at all, of the Universe as of a limited domain, governed by personal decrees of limited applicability and special providences to meet contingent emergencies as they arise. Persons who think of mankind as degenerate beings fallen from a high estate, moving upon a down-grade toward inevitable disaster—helpless of themselves, but for an arrest of whose downward progress they seem to think it only necessary to secure the enactment of some kind of a law, prohibitory or other, whereby the race may be restored to primitive conditions of innocence and happiness. These persons have their uses and play their parts in the great drama of human progress—failing of accomplishment, however, because the movements of mankind along the lines of civilization are not determined nor determinable by human prudence, wisdom or design, nor to be arrested or greatly modified by whatever protest, persuasion or statutory enactment, not in harmony therewith.

To prevent insanity, the fact is conspicuous that the antecedent conditions essential to its development must be so modified as to change the sequence.

What are the antecedent conditions essential to the manifestation of insanity?

(a), An inherent, consequently inheritable, peculiarity of organization, not common to the race but characteristic of a defective class of persons, and recognized, properly, as a structural 'potentiality of insanity.'

(b), Certain lesions of nutrition—whether from deprivation or excess—inanition, indigestion, intoxication, or inherited dyscrasias of various kinds.

(c), Exhaustion of organic energy transmutable by cerebral activities into mental force, by unusual or excessive expenditure in work or dissipation.

(d), Physiological limitations determined by germinal or spermatic conditions, by which structural types, growths, activities and longevities of individuals are dominated through every stage of existence, however influenced by external relations.

Of these antecedent conditions, some of which are essential to the development of insanity, it will be seen at a glance that not one of them can be successfully eliminated from present conditions of society, although there may be an ideal remedy for each.

The first mentioned, for example—that of inherited defect of organization—might be eliminated in time by countermarching the column of civilization and returning to primitive, or savage conditions of society, in which the defective drop out of the procession early in life because of their original incompetency to continue the effort required for existence, if not aided and abetted thereto by naturally instructed or instigated kindred, leaving only the more perfect to survive. But this we will not do; for whatever may be said or sung of the wisdom of nature and the beauty of things natural, no people having once reached a high plane of civilization by spontaneous effort has been known to return to barbarism or savagery. Disappointed and dissatisfied individuals occasionally seek the wilderness hoping to escape the exactions of good society morally and otherwise, but they represent exceptional characteristics.

Asexualization of the recognisably defective and constitionally vicious, criminal and otherwise offensive and unfit members of society by surgical interference, now safely practicable, would do this business in time. But however patent the fact may be that we are breeding criminals and lunatics and paupers and prostitutes at a constantly increasing ratio, as an inevitable sequence of our acts of benevolence and humanity—and that a compulsory solution of the problem will some day be made—it will require more than one 'campaign of education' to secure the adoption of so effectual, rational and beneficent a measure. Meantime it is a waste of energy to talk about prohibiting the legalization of marriages between defective parties as a remedy, as all obstructive marriage-laws contribute only to an increase of bastardy, feticide and kindred vices. The uniform demands of organic appetencies will not be satisfied nor held in abeyance, effectually, or to any considerable degree, by statutory enactments. Comets have never been deflected from their courses by papal bulls ; nor can the imperious sentiment of sex in man be suppressed by ordinances.

Many worthy persons now believe that the second conditions mentioned—so far at least as they may be incidental to alcoholic intoxication—can be corrected by law. But, however commendable their motives, or valuable their work consistent with such belief, the advocates of 'prohibitory laws' for the elimination of alcoholic intemperance from society must admit that the end is still far from accomplishment with but little probability of success in the near future.

There are other poisons, also, that are more efficient than alcohol as ordinarily used, in the provocation of insanity—poisons that are developed within the body—the presence of which is neither voluntary, nor recognized as vicious in a moral sense by unskilled observers,—but none the less indicative of depravity of organization, manifested by depravity of functions to which such poisoning is attributable. Neither men nor women—not even Doctors of Medicine—have ever been persuaded or compelled, to live rationally at the expense of natural or acquired inclinations or appetites, or in violation of the decrees of Fashion.

Conditions (*c*)—or the undue expenditure of organic energy, whether by overwork or the indulgence of exciting passions, cannot be interfered with to any considerable extent without encroaching upon the 'inalienable rights' of persons to an intolerable degree. Ambitious men and necessitous women will continue to exhaust their energies by untimely toil. Gamblers of all grades of respectability, will strain their faculties to utmost tension in their efforts to exchange nothing for something—whether it be to effect a 'corner in wheat' or beat a faro-bank. The libidinous will not cease to pursue their pleasures, sacrificing sleep at the shrine of Venus ; and anxious wives and mothers with saddened brows will still keep vigils awaiting the return of recreant husbands and undutiful or prodigal sons. These are things that cannot be controlled by law, nor greatly modified by education.

Conditions (*d*)—of unquestionable force and importance—preceding, and probably involving all subsequent conditions incidental to constitutional evolution, are not sufficiently within the scope of present knowledge to be corrected by any known method of interference.

Insanity is, therefore, not only not preventable but increasing and certain to increase with the progress of civilization that, by its arts and charities, stays the relentless and remorseless hand of Nature from weeding her garden of humanity of the defective, superfluous and unprovided for.

Is this a gloomy outlook for the future of humanity? Not for him who has come to recognize humanity as a part and parcel of the universe, harmonious in its co-relations, responsive to its own necessities under all of the varying conditions of its historic development. To such only as in their egotistic infidelity and short-sightedness think that the conduct of the universe depends upon their action and apprehend immediate disaster should their schemes fail of accomplishment, is the future ever beclouded.

Thus far the strong have been strengthened by bearing the burden of the weak. When the burden shall have increased beyond certain limitations there will be a response to impending necessities, the character of which we need not now anticipate. Our duties are immediate, and pertain to whatever is nearest to be done. What we do constitutes the antecedents of sequences that we call the future; differing widely from results anticipated or predicted by those who are the conspicuous actors of any given present time or generation.

CLINICAL LECTURES.

PREGNANCY IN A CASE OF CURED METRO-SALPINGITIS—THE ELECTRIC TREATMENT OF METRITIS WITH LACERATION OF THE CERVIX.*

G. BETTON MASSEY, M. D., PHILADELPHIA.

This woman, aged 38, is quite an old acquaintance, having been first seen by me at Dr, Bradford's clinic at the Pennsylvania Hospital, five years ago. She then complained of extreme tenderness in the left ovarian region,so great indeed as to render her almost completely helpless. Examination disclosed an enlarged uterus with a deep laceration on one side, to its left there was a soft, irregular mass pressing the uterus to the right andvery tender. The case presented a complete picture of a latent metritis due to the laceration that had occurred five years previously at her confinement, with a more recent extension of the affection to the left tube. Shortly afterwards the case was lost sight of, and only last year I learned that the cervix was repaired later in 188?, by a surgeon of this city. This operation closed the gap in the cervix nicelybut plunged the patient into an illness that lasted more than a year, the metro-salpingitis being apparently aggravated. She appeared at this clinic about a year ago in a greatly broken condition, the tenderness and pain in the left groin being somewhat worse.

In placing her on electrical treatment it was thought best not to risk a direct treatment of the enlarged and painful womb, but begin the more tedious method of vaginal applications to the left tubal region. The negative pole of the galvanic current was used, covered with soaped absorbent cotton, with a current of about 50 ma. for some minutes twice a week. Later on in the treatment of the case several intra-uterine negative applications were tentatively given owing to the slowness of the improvement. At first she could stand but 15 ma. because of production of great pain, the current being subsequently used at a strength of 35 ma. These treatments were always painful and followed pain and were given up in favor of the vaginal applications, though I don't doubt they were of great service. To-day she is the picture of health, in spite of some dyspepsia, and tells us that she is five months pregnant.

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* A Clinical lecture delivered to students at Howard Hospital.

This case is a good illustration of the fact so frequently reiterated by me, that salpingo-oöphoritis is but an extension outwards of uterine inflammation, and is amenable to cure by vaginal applications of elictricity if the uterus is co-incidently restored to health. To restore the uterus to health will usually require this addition of direct applications of the galvanic current to the endometrium, but that these applications require some care in order that the patient's immediate condition shall not be aggravated is no argument against the method, as it gives us a mode of actual cure for conditions now almost always condemned to the knife. Even the pessimists among gynecologists, who have been removing so many of the tubes and ovaries in this condition, have recently awakened to the fact that in so doing they leave the original and an important present seat of the affection still in the pelvis within the uterus itself, and are now recommending that everything be removed at once. This association of metritis with inflamed ovaries and tubes was pointed out by myself over a year ago, and I also pointed out that in electrical treatment we have a remedy in all cases not connected with abscess formation or due to tuberculosis. To turn at once to amputation is against the dictates of reason, and incompatible with present practice in other departments of medicine.

The other case shown to you to-day, and whom we see for the first time, presents an example of a stellate laceration of the cervix of a uterus that is itself much enlarged. Some of these tears doubtless antedate the last confinement, which occurred ten months ago. Since that occurrence the involution of the uterus has been imperfect and she has had a continuous slight hemorrhage, which has not yielded to intelligent treatment at the hands of the physician. The uterus is very large and retroverted. We have here to deal with a case of subinvolution due to a hemorrhagic endometritis and a laceration of the cervix. In examining the cervix with the speculum I fail to find certain evidence of the recent occurrence of the laceration, as it is nicely healed over, just as a neglected cut in your lips would heal over with depression at one point.

It is evident that this woman suffers from the metritis and endometritis; to attribute her present condition to the theoretical influence of this healed tear is to reason in defiance of the known facts of inflammatory conditions and their pathology. This high state of hemorrhagic endometritis is of microbic origin and not due to the tear. It is, of course, possible that the laceration gave a ready entrance for microbic agencies within the uterine parenchyma originally, but that was done some time ago, and to cut out the healed scar now will not undo it.

The operation of trachelorraphy for these cases is based on pathological conceptions that antedate our present knowledge of the germ theory of disease. I shall therefore not advise that the case be treated in this way at present, but wait until the catarrhal affection of the endometrium, with its fast spreading influences within the uterine parenchyma, shall have been brought under control. If then the patient wishes this moderate rent repaired it can be done safely, though it is hard to perceive a reason for doing the operation other than the cosmetic considerations.

To cure the endometritis we have a choice of the curette or the galvanic current. Either will do it probably, though I cannot but regard the current as used here preferable for many reasons, as being a more certain and more scientific mode of altering the diseased surface to a controllable and safe extent, while also promoting absorption of effused products within the parenchyma and contraction of its muscular tissue. Several weeks treatment will be sufficient and there will be no need to use ether, have a trained nurse in attendance and make an operation of it.

It is also extremely unlikely that one curettage will suffice for this case, as there is no evidence of retained decidua as a cause of the subinvolution.

[NOTE.—After two applications of the positive, carbon electrode to the cavity the hemorrhage ceased. A few subsequent applications reduced the uterus to a nearly normal depth and removed the tenderness and pain.]

A Wish.

Tommy. "I wish I could go to night school."

Papa. "Why, Tommy; you go to school all day."

Tommy. "Well, if I did, I could play ball day."

COMMUNICATIONS.

CHOLERA INFANTUM AND ITS TREATMENT.*

MANUEL SEPTIEN, M. D.,† QUERETARO, MEXICO.

There is scarcely any disease that causes a greater mortality in childhood than that known by the name of estival diarrhœa or infantile cholera. In one single week, the last one of July of the present year, 1126 deaths occurred in thirty-three of the largest cities of England, caused by this disease alone. Statistics show everywhere a notable increase in the number of deaths during the months of June, July and August, that is to say, during the warmest season of the year. The malady is not limited to children only, but attacks also a great number of adults and old people (cholera nostras), being less mortiferous in the latter than in the former in whom it causes a mortality of 50, 60, and even 80 per cent. Only Asiatic cholera, to which it has the greatest similarity, can be compared to it for its ravages.

It is undoubtedly of microbic origin, as recent investigations have proved. It is not determined by substances of difficult digestion in the digestive tract; for it presents itself with the greatest frequency in children who take no more food than the maternal milk. Micrographic studies have revealed the presence of a special bacillus of very small dimensions and having a rounded form, and which abounds in the excretions to such a degree that in grave cases these are formed almost entirely of the organism in question, mixed with a little mucous and bacteria of putrefaction, and of amyloid bodies similar to those found in dysentery, which are probably white corpuscles altered. The bacillus is not found in the blood nor in the organic tissues; the epithelium of the kidneys is infected and degenerated, and the nutrition of the lungs suffers, which explains the brochopneumonia that is so frequently found in the autopsies. These anatomical alterations are probably the result of the accumulation of ptomaines in the blood and the rapid abstraction of water from the tissues by the abundant vomits and evacuations that characterize this disease. The exfoliation that the organism suffers is such that in a few hours, in the most severe cases the most robustchildren are turned to mere mummies.

But the energetic drainage is only the supreme effort of nature to rid the organism of the deleterious elements that poison it. To try to suppress it by therapeutical means is not an easy or a rational thing to do. It would only hinder the natural curative process. The only thing that can be done is to oppose the extreme dehydration of the tissues, by restoring to them without delay, at least a part of the water lost. This is the all important therapeutical indication, and no drug can take the place of pure cold water.

All the curative methods tried leave much to be desired. Their results are very precarious. All consist in the administration of medicinal substances, now astringents, now absorbents, antiseptics or antiperistaltics, and in the prescription of some alimental regimen. Such treatments are not in conformity with the great principle that governs therapeutics, viz., *rest of the organ that suffers.*

In the disease of which we are treating, it is very easy to act upon this great principle, seeing that the disease is of short duration, one or two days being the length of time that the gravity lasts. It is perfectly compatible with the life of an individual to suppress all food for twenty-four or forty-eight hours. Besides the condition of the mucosa of the digestive tube will not permit the absorption of any medicinal or alimental substance. The enormous exudation that is transpiring prevents all digestive and assimilative work, as the exosmotic current has drawn off all the liquids that contribute to digestion. Only the water administered to the patient in great abundance, by occupying the stomach and intestine will be able to oppose a mechanical obstacle to the pathological exudation, in turn to be absorbed by the mucosa, since it requires no digestive work, but penetrates to the circulatory current by the simple act of imbibition, going to restore to the blood the water lost, and helping the skin and kidneys to eliminate the poisons that circulate through the whole body. In this physiologico-pathological consideration is founded the most efficacious curative method for infantile cholera, that proposed by Luton, of Réims.

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* Read before the American Public Health Association, Chicago, October, 1893.

†President of the Board of Health, Queretaro, Mexico.

All of us physicians who practice in Queretaro, Mexico, have employed it for many years, and we are witnesses of its marvelous results. We have the conviction of having saved by it innumerable lives, producing veritable resurrections; even we are amazed, when we find cases in a state of collapse—wasted, cold, pulseless, breathless, without strength even to cry, with the mouth dry like parchment—to see them returned to life by a simple glass of cold water. It causes amazement to see them from the moment they hear the precious liquid being poured in the glass, open their almost closed eyes and direct their little hands toward it as though they would like to snatch it from us. Then they drink away without satisfying themselves, stopping only to take breath and then on, until they drain the last drop from the glass. After a few minutes they generally vomit all the liquid they have drunk. If water is again offered to them, they turn to drink it with the same eagerness, falling directly in a tranquil and refreshing sleep. Generally they do not vomit again, and from that moment you can consider success assured.

On awakening it is found that the aspect of the little patient has changed completely. The features are already animated, the heat of the body begins to reappear and the pulse begins to make itself perceptible. This most simple of treatments which once undertaken ought not to be abandoned, consists in the absolute suppression of all food and medicine for twenty-four hours, or at the most, forty-eight hours, and administering pure cold water in abundance.

Afterwards, the only thing that remains to be done is to turn gradually to a convenient alimental regimen. A small quantity of milk is added to the water, increasing it little by little until by the end of three or four days, nothing but pure milk is given. If the complete cure is not made in this short space of time, it is a sign that the milk is doing harm and ought to be suppressed completely, substituting rice gruel, a food at the same time nutritive and constipating.

Let me strongly call the attention of this assembly to this point, the suppression of milk in cases of diarrhœa. Although the milk regimen is advised by the greatest practitioners as the most adequate in gastro-intestinal diseases, at times it is not tolerated and the evil continues in spite of the best of treatment until the milk is abandoned, replacing it by various gruels, principally of rice. This assertion is based on my already large practice, both in my own family of ten children, and in my clientele of twenty-five years.

Even the milk rendered sterile by repeated boilings, gives equally unfavorable results, perhaps for the great tendency that it has, like all organic substances, to decompose, especially in hot weather.

When once the acute period of the disease has passed, nitrate of silver in solution (5 centigrams to 50 grams of distilled water) may be prescribed, calomel in very small and repeated doses, or the most powerful antispetic that we know, bichloride of mercury in the form of Van-Swieten's liquor, six drops every four or six hours, in a mixture of equal parts water and mucilage. Opium, bismuth, and especially salol, which gives most brilliant results, will complete the treatment.

Very important details during the critical period are:—the keeping of the child in the most complete quietness, not permitting it to sit up even to vomit; giving it water in a clean sucking bottle; covering the body with blankets and placing bottles of hot water round the patient to give him heat. If any indication should present itself where it would be necessary to stimulate the heart's action, salt water injections may be given, in the proportion of 6 per 1000, in the subcutaneous cellular tissues, by means of a small exploring syringe.

A very important point, and one that should never be forgotton, is that the disease is very infectious and, for that reason, every precaution ought to be taken to avoid transmission to other children and even to adults. Contagion will probably take place by the dissemination in the air of the vomits and evacuations drying on the cloths and contaminating the foods and drinks.

In the Mexican Medical Congress that took place last year in the Capital of the Republic, I presented a paper on the treatment of Asiatic cholera, based on the same principles I have expounded to combat infantile cholera. Happily we have not had an opportunity of trying it, but I think that if cholera should make an appearance, a trial ought to be made; more so, seeing that there does not exist any proper treatment against a disease so terrible. One half of all cases attacked (more or less) terminate fatally whatever may have been the curative method employed. Until now, only the energetic, preventive measures employed in the United States and Great Britain, have given satisfactory results.

Therapeutics are important once the disease has declared itself. The reasoning that I expounded in that medical reunion was the following: Asiatic cholera is a disease analogous to summer cholera to such a degree that they are often confounded. Both are of microbic origin, they breed in the same season of the year, and never, or very seldom, in winter. The clinical features are identical in the two diseases and the death rate is almost equal in both. If then we cure infantile cholera so efficaciously with the method that I have described, it is possible, and I believe I can say it is probable, that it may be applied to the other with equal or like success. Although they may be two distinct morbid entities, that should be no reason why it would be absurd to apply the same treatment when they have between them such a common affinity.

Typhus exanthematicus and typhoid fever, two diseases although distinct, have great analogies and are susceptible to the same treatment, and so, like this, other examples can be found.

The recent summer epidemic, which in some localities has been very severe, has served to confirm the existence of the microbe that originated it and the pathological alterations of which I spoke at the beginning.

I have the firm conviction that the American Public Health Association would do a true service to mankind if they would deign to give their high approbation to the simple method of which I have spoken, which can be reduced to the three following precepts:

1. To suppress all nouishment and medicine for one or two days.
2. To give at discretion pure cold water.
3. To return by degrees to a rational regimen.

These precepts should be recommended to the infant protective societies, nursing institutions, lying-in hospitals, etc., and, in a word, it could be made known everywhere by every possible means. This Association would only have to say the word and it would very soon be adopted in the three great countries which it represents.

VENESECTION IN ACUTE RHEUMATISM INVOLVING THE GRAVID UTERUS.

E. M. FUREY, M. D., NORRISTOWN, PA.

Mrs. G., born in Ireland, forty-two years of age, mother of eight children, all living and in good health, the youngest of whom is four years old. She had always enjoyed good health until early in May when I was called to attend her. She complained of nausea and general lassitude. She had been losing flesh and was much debilitated. She had menstruated but twice since the birth of her last child, the last menstruation being nine months previous, and she feared that she was pregnant. At her request I made a vaginal examination from which I concluded her fears were groundless. She had previously consulted another physician who told her at first that she was pregnant and subsequently assured her that she was not. I prescribed for her symptoms and she improved to some extent.

After a few weeks I was called again. She then complained of pains in the thighs, changing to the body of the uterus, and being prominent in the subumbilical region. The pain was greater upon pressure and the patient was confined to the bed. She also suffered acutely from a dragging sensation that ran from the loin toward the pelvis, thence to thighs and the external genital and sacral regions. It was at this time I discovered by external examination that she was pregnant, she was probably in the fifth month of gestation for her sufferings were much increased by the movement of the fœtus. The pains were not constant, and during the remission the patient would feel quite comfortable. But when the uterus and its ligaments were attacked, there was great recto-vesical tenesmus. There was a constant desire to urinate followed by a severe smarting sensation. There was some fever and at times great thirst. I diagnosed the case as one of acute rheumatism involving the uterus and its appendages, and feared the patient would abort. Her sufferings were so intense that she demanded instant relief. In order to prevent miscarriage I prescribed anti-rheumatic treatment with little if any improvement. I then resorted to the anti-phlogistic lancet and bled the patient freely. She immediately expressed herself as being relieved of the pain as if by magic. I had at once won the confidence of the patient and her friends.

Never before in my experience had I met a case of acute rheumatism involving the gravid uterus and its appendages. Nor had I ever read of one. Yet after due reflection, considering the structure of the uterus, there should be no great surprise. Is is claimed by most authorities on the subject, that it is extremely rare. This phase of the disease has been studied by German and French clinicians, and has been ably discussed by Salathe, in a thesis to the French Academy. Most of the German authorities attribute this double recto-vesical tenesmus to a rheumatic affection that is not always exclusively limited to the womb, but which also invades the neighboring organs. That its influence upon gestation is varied and may give rise to premature delivery. The pain may be mistaken for normal labor; we may have dilatation of the os uteri, but abortion is not so frequent as might be supposed, at least this is the language of those who have made a particular study of this disease in its varied manifestations. "Its influence upon labor is to retard its progress and arrest the spontaneous expulsion of the child, and it likewise affects the expulsion of the after-birth by the irregular contraction of the organ. It diminishes the lochial discharges and the lacteal secretions, and is accompanied by acute and persistent abdominal pains which may be mistaken for peritonitis which does not exist."

The mode of treatment which was followed in this case and which gave such instant relief, is likely to be criticised by my medical brethren of the "anti-bleeder" school who like most fanatics never reason clearly because of obscured mental condition, in reference to any particular subject which they have sealed with disapprobation regardless of all the law and the facts. It is for these extremists that I have recorded this case, that they may profit by the experience of the bleeders of the present day and not be forever holding up to censure the errors only of the bleeders of all ages. In reference to the bleeders of the past, I think it was their judgement that was at fault, and this coupled with a crude physiological knowledge of remedies has brought the lancet into disrepute.

Samuel Gross used to say, "The profession is like a flock of sheep, where one jumps all follow." He also said "that when the profession gets its balance it will come back to rational bleeding." If medical history is to be believed, it seems to me the remark of the learned Professor is very pertinent, as the "balance" of the profession in general seems to have been very frequently disturbed, much to the detriment of suffering humanity. It is difficult to imagine that such men as Gross, Da Costa and that famous knight of the lancet, Dr. Hiram Corson, could have been misled in active practice for more than a half century. It follows, therefore, that rational bleeding is a therapeutical remedy of great utility and more attention should be paid to the subject by the faculties of our medical institutions. The arterial sedatives that are so highly and persistently extolled by the manufacturing chemists (who to-day seem to be striving to lead the profession), and which are also endorsed by the anti-bleeders, are of great value in many cases; but their field of usefulness is limited and they can never supplant the use of the lancet. No amount of theory can be balanced in the scale against practical experience.

OURSELVES AS OTHERS SEE US.

S. S. TOWLER, M. D., MARIENVILLE, PA.

Some one, I think it was Henry Ward Beecher, has said—"Many a man thinks he has religion when he only has dyspepsia, and many a man thinks he is going straight to the devil when he is only bilious."

Some things have happened now and again in the experiences of the past, that lead me to suggest in this brief paper that, more or less frequently, the diagnosis is wrong because the practitioner has dyspepsia, and the prognosis gloomy because the doctor is bilious. How often have we seen the generally bright physician mistaken in the most unaccountable manner, and how often our own ideas have undergone a complete change, without a restudy of the case or apparent cause. To-day your medical friend prescribes well and accurately, next day or next week, he mixes things up worse than a compounder of "patent cure-alls." To-day your patient or mine, is given scant courtesy and cold comfort, to-morrow, the same patient in the same condition is given attention and a hopefulness that does him a "world of good." And you and I thought on each of the separate days that we were doing the correct thing. How much was *our* stomach, and *our* liver to blame for the difference in the patient's condition from our own point of view. Is a practitioner, whose stomach is rebelling against his own foolishness, in a fit condition to judge nicely of the infirmities of his patient—Is the doctor with a torpid liver capable of making a cheerful prognosis—As a rule I don't believe he is, and I have no doubt that our own physical condition has much to do with the success of our treatment, though the ailment—personally—may be so slight as to pass unnoticed, except by the thought of, "I don't feel well."

I don't propose slopping over in a long-winded article 'analyzing' this condition, I simply want to draw attention to it "for the good of the Order," on the principle that we learn by "line upon line, precept upon precept, here a little and there a little, etc."

The great and good surgeons and gynecologists of the day, insist that personal cleanliness of the surgeon himself is of vital importance to successful operation. Let us carry the idea still further and learn that personal healthfulness—a clean stomach and an active liver—are of vital importance in the line of general therapeutics. Let us go a step further and learn for ourselves, that if we would be the educators in hygiene, etc., that we claim to be, then example must follow precept. This means that, indigestible trash, no matter how "toothsome," must be banished from our table, side-board, banquet and reception, and with it should go by all means "old Frumenti," and all his kindred spirits. It means that, *our* back yard, *our* alley, *our* vaults, *our*selves and *our* belongings must be kept consistent with our teaching and advice to others.

There is nothing new in this (more's the pity) that so little attention is paid to knowledge acquired. Hundreds of physicians have read the editorial, "The doctor and the cook." If ten per cent. of them put it in practice, there will be more stars in professional crowns than the editor ever fondly dreamed of. Said an elder in the church, "had it not been for the inconsistencies of christians themselves, Christianity would have swept the world long ago." So with "ourselves," had it not been for personal and persistent violation of our own code, we would have doubled our power for the physical good of our generation.

What student fresh from fields and woods, doomed to six hours of lectures, *per diem*, in a poorly-ventilated room, goes out of it with a clear idea of two per cent. of what has been uttered, and in my student days, woe to him if the Professor caught him napping. A recollection comes to me now, of a wag punching his sleepy neighbor in the lecture room, with his elbow and the remark, "Wake up Jim, you have just missed one of the old man's real nasty stories."

What practitioner cannot recall, (if he is honest with himself) the fact, that, his own supper was more to blame for the weary hours and his own crankiness beside the slow obstetric, than any "foolishness of the patient. How many doctors blame the out-house vault for the fatal ending of the case, when their own is in as bad condition. How many "scold" the patient for undue exposure, when they, themselves have not thought enough or pride enough, to mend the soles of their own shoes. How many talk about—"no wonder she died with so much dirt in the house"—when their own office is akin to a poorly kept pig-pen. What importance can a doctor expect to be given by a patient to his directions as to "diet," while he is a persistent violator of his own rules, or what lasting impression can a professor make on his students when he, and all the rest of us in the Fraternity with him, show contempt for the advice given, at the next Society banquet.

We all have been greatly concerned that the coming medical man should be more competent than he of the present and, what with the new Examiner's Bill and improved methods of teaching in the colleges, the State Society may be fairly said to have done its duty by the practitioner of the future.

Now suppose we take a survey of ourselves and see if we cannot be more of a power for good, and advance the dignity of a great profession by personal and collective consistency.

Every thinking man knows that, no course of lectures, no matter how ably delivered; no clinics, no matter how expert the demonstration; no bedside exposition,no matter how clearly brought out, can give a man good judgment or sound common sense. BUT there is one thing we *can all do*, and that is this—observe our own dietetic and hygienic laws personally, and give what brains we have a chance.

Let us be *practitioners indeed.*

SOCIETY REPORTS.

TWENTY-FIRST ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION IN CONJUNCTION WITH THE INTERNATIONAL CONGRESS OF PUBLIC HEALTH.*

INAUGURAL ADDRESS of the President, Dr. T. H. Durgin, of Boston.

The great trust which the Association took upon itself twenty-one years ago has been worthily held, and the work to which it has addressed itself in the interest of humanity, has been diligently pursued. It is fitting, perhaps, at this time, when we may be said to have attained our majority in years, to take a restrospective glance of public sanitation, and to note the possible results of its application in the relief of human distress. The work of the sanitarian is manifold, and deals with the most vital of our personal and social interests. It deals with the air we breathe, the food we eat, the water we drink, and with the general welfare of mankind. It means the investigation of the rise, progress, and decline of epidemics, and the fostering of the growthof works and projects designed to prevent and remove the causes of disease.

The sanitarian concerns himself but little with the cure of disease. The problem which he seeks to solve is how disease can be averted. The pathologist establishes the nature of morbid processes, and his investigations suggest to us the appropriate remedy. The aim of the sanitarian is to seek out and remove the cause or causes which produced these processes. It has been said that preventive medicine embraces everything which relates to the physical well being of our fellowmen, so that it has to deal with all physical evils and, incidentally, many of a moral character. Its object is the health, and therefore the happiness and prosperity of man.

In Mexico it has been shown that sanitary science must have reached a high degree of perfection in its history. Previous to the conquest of the country by the Spaniards, the towns were thoroughly and efficiently supplied with water by the most perfect system; but the teachings of these early times were not permanently effective. The magnificent civil works were doomed to suffer ruin, and the world passed through dark ages of mental and physical barbarism.

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* Abstract of papers read before the Joint Sessions of the Congress, Held in Chicago, Illinois, October 10, 11, 12, 13, and 14, 1893.

The question of private or house drainage is more complex, and should be constructed only under regulations prepared by competent sanitary engineers, by plumbers who have shown their competency for such work to a proper board of examiners and have been licensed therefore. The material for this work should be strong, tightly jointed, securely trapped and ventilated above the top of the house.

In the City of Boston our private drainage, like that in most cities, is unsatisfactory, and the cause of an immense amount of inspection, complaint and annoyance, and undoubtedly the cause of much ill health. We have statute laws and city ordinances which specify the method, material and workmanship necessary for the construction of house drainage. Plans for construction and repairs are submitted to, and the work approved by, the inspector of buildings. The board of health is called upon to find defects and to order repairs, and such repairs each year number about 4,500.

For the purpose of ascertaining to what extent defective conditions of plumbing exist, and to what extent traps are supplied and water closets substituted for privy vaults, we have taken a large number of blocks of dwellings, both new and old, each season for thirteen years, and made house-to-house inspection.

The construction and care of our public and private streets have a sanitary side to be considered, especially when we remember the considerable proportion of the area of our cities which they occupy and the frequent unsanitary condition in which we find them. While the construction of streets is almost purely a matter for the engineer, the health officer has frequent cause to complain of their filthy condition. Most streets in all cities present a more or less unclean and offensive surface. This condition may be due to a faulty pavement, want of pavement or a lack of care, supported by the popular notion that an unclean and muddy condition of the streets has no appreciable effect upon the public health. Macadamized streets where much used, are unclean and offensive most of the time.

It is a common thing to find on death certificates instead of the morbid process which caused death, such indefinite information as "disease of bowels," "disease of brain," "disease of skin," "stomach disease," "ascites," "convulsions," "dropsy," "fever," "debility," "teething," "inflammation," "infantile," "heart failure," and other unlikely causes too numerous to mention, and which ought never to be used upon the records as causes of death.

In his own city, such certificates are rejected, and a competent physician sent to view the remains and consult the family or friends of the deceased for information with which to make a proper certificate.

It is to be noted, however, that information gathered in this way cannot be regarded as wholly trustworthy and often results in the statement of "unknown cause of death."

The mention of cholera, like that of smallpox, strikes terror to the people of this country, and while the deaths from these diseases are infinitely small, the fear of them has served the municipal health officers in securing almost unlimited facilities for their prevention and control, which means may be largely converted to to the care of other more common and destructive contagious diseases.

Consumption, the most destructive malady to the human race in our country, has received the necessary attention of the bacteriologist. He has demonstrated to us satisfactorily, the cause of the disease, the methods of its transmission, and the means for its prevention.

He is sorry to say that as practical workers in public sanitation, we have sadly neglected to apply the means which we believe would prove effectual in largely abating the prevalence of tuberculosis.

The isolation of all persons suffering from consumption, would be impracticable and perhaps unnecessary, but the use of small sputa cups containing a disinfectant at home, and bits of absorbent napkin used and securely concealed in traveling, to be burned or otherwise disinfected on returning, should at least be urged by public health officers, and popularized as much as possible.

Earth worms it was urged bring to the surface bacilli which infect the dead body, and in dry weather they may be inhaled in the form of dust. This, it is suggested, is the reason why the health resorts of the south of Europe are centers of tubercular contagion.

Drs. Lortet and Depugnes, of Lyons, related cases of such infection, and described experiments which they made which led them to demand obligatory cremation. They mixed the sputa of consumptives in earth which they placed in pots. A month later the worms in them were tubercular, and the earth they passed through communicated the disease to animals.

Tenement and lodging houses are subjects for the constant watchfulness of the health officer, and they are too frequently found in an overcrowded and filthy condition. They are principally occupied by the poorest classes of people, including the newly arrived emigrant, whose habits of cleanliness are of the lowest order.

Turning, in conclusion, from the more onerous everyday duties of the municipal health officer to topics of greater popular interest, we find an increasing growth of public sentiment in all parts of the country favoring the municiple provision of large public parks, free public baths, small open spaces and open air gymnasiums for the enjoyment and sanitary welfare of the masses of people whose whole time is spent in the toil of our large towns and cities.

REPORT OF THE COMMITTEE ON RESTRICTION AND PREVENTION OF TUBERCULOSIS.

This report was read by the Chairman of the Committee, Dr. J. N. McCormack, of Bowling Green, Kentucky. The Committee offered as its report the following conclusions and recommendations.

1st. Tuberculosis has been conclusively demonstrated to be contagious, by bacteriological experiments, by clinical observations and by a study of the history of the disease.

2nd. Tuberculosis is a preventable disease. Its preventability follows as a logical sequence upon its contagiousness, but has likewise been demonstrated in practical life.

3rd. The contagium of tuberculosis resides entirely and solely in broken down tubercular tissue. A person suffering from tuberculosis therefore does not become a source of danger to others until he begins to give off broken down tubercular tissue either in the form of sputa from the the throat or lungs, diarrhœal discharges from the bowels, or matter from a tuberculous sore such as lupus, white-swelling, cold abscess, scrofula or tubercular inflammation of a joint.

4th. A person suffering from tuberculosis can be made entirely harmless to those about him by thorough sterilization of all broken down tissue immediately upon its being given off. With proper precautions it is therefore possible to live in the closest relation and upon the most intimate terms with consumptives without contracting the disease.

5th. Tuberculosis is not hereditary. A predisposition to the disease can be transmitted from parent to offspring, but this is no more true of tuberculosis than it is of all other contagious diseases.

6th. A predisposition to tuberculosis can be created anew by malnutrition or by anything which depresses the nervous system.

7th. Tuberculosis affects animals as well as man and is identically the same disease in both. In domestic life human beings and animals mutually infect each other.

8th. The media through which human beings are ordinarily infected by animals are milk and meat.

9th. Houses in which consumptives have lived and in which immediate sterilization of all brokon down tissue has not been practiced, are infected houses and are liable to convey the disease to subsequent occupants.

10th. Spitting upon floors and into handkerchiefs and permitting the broken down tissue to dry and become pulverized, is prolific cause of spreading tuberculosis.

11th. Temporary occupation of hotel rooms, sleeping-car berths, and steamer cabins by consumptives in the infectious stage can infect them so as to convey the disease to subsequent occupants unless proper precautions are taken against contamination of the bedding, furniture, and walls with broken down tubercular tissue.

We recommend the following practical measures for the prevention of the disease:

1st. The notification and registration by health authorities, of all cases of tuberculosis which have arrived at the infectious stage.

2nd. The thorough disinfection of all houses in which tuberculosis has occurred, and the recording of such action in an open record.

3rd. The establishment of special hospitals for the prevention of tuberculosis.

4th. The organization of societies for the prevention of tuberculosis.

5th. Government inspection of dairies and slaughter houses, and the extermination of tuberculosis among the dairy cattle.

6th. Appropriate legislation against spitting into places where the sputum is liable to infect others, and against the sale or donation of objects which have been in use by consumptives unless they have been thoroughly disinfected.

7th. Compulsory disinfection of hotel rooms, sleeping-car berths and steamer cabins which have been occupied by consumptives, before other persons are allowed to occupy them.

[The reports and recommendations of the Committee were adopted.]

TROPICAL DIARRHŒA,

by Sir Joseph Fayrer, of London, England, and read by Dr. Gihon.

This is a form of disease which is generally, if not always, the result of tropical and climatic influences, and the debility and cachexia induced thereby. It is now not infrequently observed in Europe, owing to the ever-increasing means of communication with foreign countries. It is apparently generally confined to adults, is insidious in its onset, slow in progress, and often, when not arrested sufficiently soon, fatal, owing to irreparable degenerative changes.

It has been described by many observers both English and foreign, in India, China and Cochin China, and Batavia. Most of the cases seen in this country come from China, India or Ceylon. In India it is met with frequently, where a form of it is known as "hill diarrhœa," from its proneness to affect dwellers in hill stations, especially those who have previously lived in the plains; atmospheric changes, vicissitudes of temperature, greater altitude, rarified atmosphere and possibly water being concerned in its causation. Some authors consider it a distinct disease from the white flux, which may be seen in any part of the country, but they are so much alike as to justify the belief in their identity, at all events for practical purposes. Occasionally there is a resemblance to certain forms of chronic dysentery; the two conditions may be associated or one may merge into the other.

Tropical diarrhœa occasionally makes its appearance years after the subject of it has returned from the tropics. It not infrequently begins without any previous apparent derangement of health, though it is sometimes preceded by dysentery, diarrhœa, some indication of malarial infection or functional derangement of the liver or other abdominal viscera, and is not noticed until excessive soreness of the tongue and loss of strength and wasting reveal the gravity of the condition.

Semeiology. This form of diarrhœa may begin with simple looseness of the bowels, or may supervene an ordinary diarrhœa or chronic dysentery. The action produces a sense of relief. The dejecta at first may be natural and bilious, but gradually becomes light-colored, frothy, pultaceous and copious. As the disease advances they are occasional tinged with blood, and the sufferer becomes more attenuated, exhausted and incapable of any prolonged exertion. The appetite may be good, but rawness and tenderness of the mouth and tongue frequently accompanied by aphthous spots and ulcerations interfere with its gratification.

Treatment. From the insidious character of the disease, tropical diarrhœa not infrequently gains ground before radical measures for its relief are resorted to. Successful issue depends much on the patient's resolution and perseverance in carrying out instructions. Alternations of temperature, errors of diet, fatigue or excitement, exertion, mental or physical, should be avoided. Physiological rest should be insisted on.

There is a tendency in the earlier stages to get well. The object is to favor this tendency and not thwart it by neglect of precautions. Diet it the most important consideration and must be strictly regulated and adhered to; and scarcely less important is the question of clothing, habits and mode of life.

Milk *alone* should be the only diet, and it must be given in small quantities often repeated, say from 4 to 6 ounces every hour, day and night. Larger quantities at longer intervals will not do. When in the 24 hours an adult is able to take 3 to 4 quarts of cow's milk in this way, ample nourishment is afforded to support his strength and to enable him to recover.

This method of treatment was begun by the author before leaving India in 1872. After prolonged experience and trial of all other forms of remedies, he has found it more effective than anything. It seldom fails except in the very advanced and chronic cases, or in very aged persons. The conclusion arrived at is that though drugs are generally of little avail, if milk, taken as prescribed does not succeed, there is but small chance that any other form of treatment will do so.

THE SEWAGE DISPOSAL PROBLEM IN AMERICAN CITIES,

by Mr. Allen Hazen, of Lawrence, Mass.

One of the striking features of the sanitary development of American cities is the very rapidly increasing number of places which for one reason or another are treating in some way their sewage. It is not so very many years since there was hardly a sewage purification plant in the United States, while at the present time there are some thirty municipalities in a dozen different states which give their sewage a more or less thorough treatment. Of these a number are in the far West where the sewage has a commercial value for irrigation which has probably been considered quite as important as the sanitary advantages secured by the treatment, but the greater number are in the East where a dense population and increasing desire for cleanliness in the waters of streams or lakes, and particularly in water supplies, has brought to an issue problems which as yet have scarcely received the attention of the inhabitants of the less thoroughly settled states.

There are two sewage problems which are entirely different in their nature, although the same remedies may often be applied to both. There is first the pollution of rivers and lakes to such an extent that they produce a nuisance to the people who live upon their banks, and secondly the pollution of water supplies by sewage. The first case is often that of a city upon the banks of a small river which becomes so reduced in volume in dry weather that the sewage may fairly be said to be the predominating element in its composition. Up to a certain point rivers are capable of taking sewage without causing a serious nuisance to the people who live upon their banks, so long as they do not drink from them, but when this quantity has passed, deposits are formed, decomposition sets in, and the stream is rendered foul in appearance and objectionable in its odor. The exact quantity of sewage which can be mixed with water without causing a nuisance varies with local conditions and can only be approximately estimated, but as long as the limit is not passed, and the bodies of water not used for drinking, the disposal of sewage by turning it into such water is entirely unobjectionable and by far the most satisfactory method possible.

Where the sewage of a town is entering the public water supply of a neighboring town, or worse yet, its own supply, the problem is entirely different. The removal of the organic matters of the sewage becomes of secondary, although still an important matter, while the removal of those germs of disease, which would otherwise work such mischief among the consumers of water, becomes the one important point.

The author then dwelt upon the possibility of sewage treatment by chemical precipitation, which he said was the same the world over. Local conditions are only of secondary importance.

The experiments undertaken by the Massachusetts State Board of Health at the Lawrence Experiment Station some six years ago, indicated that the local conditions in Massachusetts would allow the treatment of sewage upon land with even more favorable results both as to quantity of sewage treated and quality of effluent obtained, than had been supposed to be the case from a study of European practice.

It is impossible by any combination of chemicals to secure the purification which approaches even remotely the result obtained by land treatment, but when the problem is simply to keep the water into which the sewage flows reasonably clean, the result with careful manipulation is quite satisfactory. When, however, the treated sewage finds its way into the source of the public water supply, the effluent produced by even the most complete chemical precipitation cannot be regarded as an entirely unobjectionable addition, and such water should be further treated by filtration before use.

THE COLLECTION AND DISPOSITION OF ANIMAL AND VEGETABLE WASTE IN THE CITY OF MILWAUKEE,

by Dr. U. O. B. Wingate, Commissioner of Health of Milwaukee.

As early as 1879, the city of Milwaukee began to grapple with the garbage problem, and it has been a long and serious struggle until a recent date. In the winter of 1891, and 1892, the State Legislature passed an act authorizing the Common Council of the city to enter into a contract for the disposition of garbage, with the advice of the Mayor and the Commissioner of Health. It was decided to let the contract for five years to a company who would build a plant fourteen miles out of the city, collect and remove to said plant all garbage, offal, dead animals, both great and small, and animal matter in the city of Milwaukee, including refuse matter from commission houses, etc., to said plant, in which they would dispose of it in a sanitary manner. This contract went into effect and the work was commenced in June, 1892.

The Company constructed a plant at an expense of some $110,000. They purchased a powerful steam barge for transportation; they put on fifty steel, airtight tank wagons for collection, and two large covered wagons for the collection of large dead animals. Since the first of September, 1892, the plant has been in operation to the satisfaction of the city officials of Milwaukee, creating no nuisance or stench whatever that can be reasonably objected to in its location, and the collection and transportation of the material during that time has been fairly satisfactory.

DISPOSAL OF GARBAGE AND WASTE OF WORLD'S COLUMBIAN EXPOSITION,

by Col. W. F. Morse, of New York.

Since the meeting of the American Public Health Association two years since, marked progress has been made in the destruction of garbage and waste of cities by fire. Six years experience has shown this method to be of far greater value than any other, and improvements in furnaces and reduction in cost of operation have steadily made it more popular and useful.

England has now furnaces in every large city and the number is yearly increasing. This country is awakening to the value of this method, and it has been inspected and recommended at a great number of places. The most striking and effective work done in the world is at the World's Fair, where two furnaces of the Engle Sanitary Company have been at work since the first of May.

It was early seen that the sanitation of the Fair, the care of the health of the great multitudes resident and who would come as temporary guests, would demand the best, and only those which had been thoroughly tested, methods of providing for the drainage, and the collection and disposal of the great mass of daily accumulating garbage and organic waste. After the drainage was arranged, the question of sewerage disposal and garbage destruction came up. A contract was made with the Engle Sanitary Company of Des-Moines and New York, for two garbage cremators to burn 100 tons of sewerage sludge, garbage and stable refuse. These two furnaces were built in the Fall, and at the opening of the Fair were ready for work. They are in the extreme south-eastern part of the grounds, near the Forestry building, back of the power house of the Intramural Railroad, employing the well known device of the Engle Company, two fires, one at either end, the one burning the mass of garbage on the grates, the other destroying the smoke, gases, and all results of this combustion. These furnaces have been in constant work every day since May 5.

The garbage is brought at night from 11 to 8 o'clock A. M., and placed at once in the furnaces. From 25 to 40 loads each of one ton, having sometimes ashes or water in large amounts mixed therewith. Everything goes into the furnaces, four horses, two camels, cows, deer, elk, pigs, goats, dogs, etc., all follow the same road and are burned with equal ease. No results can be seen from the chimney. A thin, invisible, carbonic acid gas, discharged at a temperature of 1000 degrees is all that results. No smoke, no odors. nothing that can be offensive is detected, Though in daily use an observer would not know any work was done, unless he came to the building. At 10 A. M. the loads of sewerage cake begin to come. This is a thick, heavy, soggy, mass of lime, foecal matter, paper pulp, etc., with 60 per cent. of water mixed. The quantity varies from 10 to 18 or 25 tons, and is the most refractory material to burn yet found. The fires are oil fed by jets of air, a pressure of 12 ounces of air doing the same work that is done in the boiler house with 120 pounds of steam. The ashes are used by Exposition people for filling low places, though they have a value of $10 per ton for fertilizers.

There are six burners spraying oil, the whole using 37½ gallons per hour. The cost for fuel and labor is from 75 to 85 cents per ton for sewerage sludge and 50 to 70 cents for garbage.

At other places where these same furnaces are used, the cost is reduced by bringing to the furnaces the paper, sweepings, and all kinds of city combustionable waste, which makes fuel to burn wet matter, and reduces the cost 12 to 15 cents per cubic yard or 30 to 40 cents per ton.

Official reports from Savannah were read showing the cost for last eight months to be 11 cents per cubic yard.

The work has been continuous, no stoppage, no nuisance, performed under observation of thousands of persons, inspected by many interested in this work from abroad, and has met with deserved credit and favor from the Board of Administration.

By adoption of similar furnaces at four points in Chicago the whole garbage nuisance could be abolished, the same work done for the city that is here performed, at a reduced cost, and the vexed problem of garbage disposal settled and got rid of once for all. This is no theory or experiment. This company was asked to do this work because they had demonstrated elsewhere their ability. There are forty furnaces or more built by the Engle Company and in successful operation, more than twenty times as many as have been built by others, but this is the most successful instance of the destruction of garbage on a large scale that has been seen in this country.

HOW CAN WOMEN PROMOTE PUBLIC SANITATION?

by Dr. Sarah H. Brayton, of Evanston, Illinois.

As instructors in hygiene, nurses have a wider scope for sanitary reform than physicians, living as they do with the families they attend their opportunity for the diffusion of knowledge is greater. Undoubtedly there is much that women could do on health boards ; there is more that they *must* do among their own sex to increase the sum of sanitary knowledge among all classes and promote intelligent cooperation with health authorities whoever they may be.

THE PROGRESS OF SANITARY KNOWLEDGE AMONG THE WOMEN OF ENGLAND,

by Lady Prestly, of England, read by Mrs. Henry Wade Rogers, of Evanston.

The author of the paper went back 20 years when she first joined the Executive Committee of the National Health Society, and attended the meetings in a small, dingy, draughty room. in a house about as unsanitary as any to be found in London, and traced the progress made in sanitary science from that time to the present. The author would impress upon all mothers and those who are responsible for the welfare of others, the desirability of giving personal care and forethought, which alone can avert the consequences of unsanitary surroundings.

NOTES ON CHOLERA AND ITS MANAGMENT IN HULL, ENGLAND,

by Dr. John Wright Mason, Medical Officer of Health, in Hull; read by Dr. Charles N. Hewitt of Minnesota.

The first epidemic of cholera occured in 1832, but the total number of deaths from the disease did not exceeded 270.

On the 10th, of August, 1849, the great visitation of the disease commenced. The total number of cholera and diarrhœa victims during the invasion was 1860, being one in forty-three of the whole population of 11,000. Six hundred persons died from cholera alone in one week in September. The average age of the victims was from 30 to 36 years of age. Of the total number of deaths recorded, seventeen hundred and thirty-eight belonged to the laboring classes and one hundred and twenty-two to the wealthy. The greatest mortality occured in those parts of the town where the levels were the lowest, and in which the unsanitary surroundings were the most noticable. It is recorded by an eminent minister that on one day—black Sunday—he himself interred no less than 43 bodies of his fellow citizens. The water supply was at that time obtained from the stoneferry waterworks, situated one and a half miles from Hull and two and a half miles from the mouth of the river, the water being obtained from the river Hull, the widespread character of the epidemic being greatly attributed to the impurity of the river water. Since 1846, Hull has increased both in wealth and population, and its area has been considerably extended. The number of emigrants passing through the port en route for America has averaged between 50,000 and 60,000 yearly during the past ten years. The infectious diseases (notification) act, 1889, has been applied to the port as well as to the urban authority. Measles was included amongst the notifiable diseases on the 10th of February, 1893.

Cholera follows the line of international communication, and with the modern increased facilities for rapidity of transit, so is the danger of its possible invasion increased by emigration or otherwise. England does not depend upon the false security of quarantine, but rather upon its sanitary administrations, and each district should be in such a state of sanitary preparedness that the disease if imported should not spread. The experience of 1892, during the epidemic at Hamburg, in those parts which are exposed, and possibly none more so than the port of Hull which was in daily communication with that cholera stricken city, must have inspired confidence in the public mind in this country and the continent of Europe, that medical inspection, the due regard for the rigorous inspection of all articles likely to convey infection, improved sanitation and efficient hospital equipment, were alone sufficient to arrest the progress of the disease. Our first line of defense against the introduction of cholera consists of the medical inspection upon arrival both by day and night, of all vessels from cholera infected or suspected ports, and should cholera have developed during the voyage amongst any of the passengers or crew, the removal of the patients to hospital and the isolation of suspected cases, and the detention on board the vessel of such persons who may be in a filthy or otherwise unwholesome condition, and who cannot satisfy the medical officer of health as to their place of destination.

The second line of defense against the possible introduction of cholera, or other diseases, should be well protected, and the early preparations against the means by which such diseases if imported, spread, should be studied, thought out and perfected in the interim, and not during epidemic prevalence and excitement. Special attention should be directed towards a pure and unpolluted water supply, the periodical and regular removal of all excreta and refuse matters in the midst of populations, the frequent flushing of all drains and sewers, the prevention of over-crowding, the systematic inspection of common lodging houses, and lastly, but not least, our food supplies.

Hull is essentially a privy town. The death rate of Hull from all causes for the ten years 1882 to 1891, averaged 20.7 per thousand. The death rate from fevers during the same period was equal to 1.26 per thousand, and for diarrhœa alone 1.10 per thousand.

The author then dwelt upon the management of cholera. The precautions which are adopted in Hull of what has been described as "the movement of a sanitary column," are as follows:

Immediately upon the receipt of a notification of cholera, or of sudden illness of a choleraic character, either by the medical practitioner in attendance, the sanitary inspectors or the police, the medical officer of health is communicated with and immediately visits the case, or in his absence his assistant. Should the case admit of removal, the horse ambulance, fully eqipped with trained men in attendance is immediately requisitioned by telephone. The assistant inspector of nuisance for the district in which in which the case occurs is forthwith acquainted and makes his appearance with a column comprising flushers, lime washers and disinfecting staff. He superintends the removal of the inmates of the house to hospital for the purpose of bathing and the disinfection of their clothing, the disinfection of the house, together with all articles of bedding, clothing, etc., which has been exposed to infection, and the destruction of such articles as may be ordered by the medical officer of health or his assistant.

The contents of the privy are removed to the destructor for cremation and the interior cleaned, disinfected and lime washed. The subsidiary drains in the immediate contiguity of the house are thoroughly flushed, and disinfectents are freely distributed in the neighborhood of the outbreak.

TUBERCULOSIS AND THE FOOD SUPPLY,

by Dr. D. E. Salmon, Chief of the Bureau of Animal Industry.

The author assumed without argument, as already established by scientific investigation, that tuberculosis is a parasitic disease, that it is caused by the multiplication of a specific micro-organism in the tissues of the animal body and by no other means. Of the two methods by which the disease is contracted with man as well as with animals, it may be admitted that the most frequent and, therefore, the most important, is the inhalation of the micro-organisms suspended in the inspired air. The speaker had no means of estimating the proportion of cases of tuberculosis which arise from infected food, but he was prepared to admit that tuberculosis of the abdominal organs and tubercular meningitis, particularly of children, were generally caused in this way. The author then considered infection through the milk supply and infection through the meat supply. Tuberculosis is one of the most common diseases of milch cows. It exists in many dairies, and may affect 50, 75 or 10C per cent. of the animals in large herds. We do not know the average proportion of cows infected in this country, but in the dairies around our large cities from three to five per cent. have been infected when diagnosis was made by the ordinary methods of examination. In the United States we have no statistics of the results of the tuberculin test except with herds known to be tuberculous. Fortunately, the milk from all tuberculous cows does not contain the bacilli. When there are tubercles in the udder, however, the milk may contain immense numbers of these germs, and this is particularly the case if the tubercular mass softens and its contents escape into the milk ducts? The milk from cows so affected must be considered an extremely dangerous article of food.

The prevalence of tuberculosis in dairy cows can be lessened and the danger from infected milk diminished by a careful and periodical inspection of the herds from which the milk supply is obtained. This inspection must consist not only of a physical examination, but must also include the tuberculin test. There must in addition be some means provided for securing the destruction of animals found to be tuberculous.

SYPHILITIC INFECTION AS A VEHICLE OF THE COMMUNICATION OF TUBERCULOSIS,

by Dr. Manuel Carmona y. Valle, of Mexico.

The author of this paper cited the history of a case demonstrating the possible association of the syphilitic virus with the pathogenic agent of tuberculosis, and the possibility of transmission not only of the syphilis but of the tuberculosis also. He had found in the ulcerations of the throat both characters.

THE INFLUENCE OF HABITATIONS IN THE PROPAGATION OF TUBERCULOSIS

by Dr. Manuel Gutierrez, of Mexico.

Pulmonary tuberculosis is more frequently observed in the United States than in the Republic of Mexico. The statistical records give a proportion of from 118 to 120 per thousand in America, while in sunny Mexico it does not reach the number of 60 to every thousand. One of the causes which contribute to produce so notable a difference in the propagation of so dangerous a disease, is the difference of the elevation in both countries, because we know that dry air is not a vehicle for the multiplication and generation of the bacillus of Koch and the relative rarefaction of the air is in a direct ratio to the elevation. Mexico being 2257 meters above the sea level, it is consequently not difficult to explain its superiority in arresting the conditions favorable to the propagation of a disease which undermines so many constitutions.

The author's attention has been called to the fact that not only in the hotels and public establishments, but also in private dwellings in the United States, there are rooms constantly illuminated with artificial light and in which the light of the sun never penetrates. The individuals who work therein are deprived for many hours of the beneficial action on the economy that we know solar light exerts, and we know that this privation and the special conditions that accompany it can contribute to the development of tuberculosis by producing (1) the anemia and its consequent state of malnutrition, preparing the ground that serves for the cultivation of the germs of the disease; (2) Increasing considerably the temperature of the place illuminated, constitutes also a propitious cause of multiplication of the pathogenic principles involved in the tuberculosis process.

PROPHYLACTIC AND THERAPEUTIC VALUE OF FOOD,

by Mrs. Ellen H. Richards, of Boston.

The prophylactic value of food is to keep the human body in a high condition of health. The main object to be gained is to establish a higher standard of health in the community, to make as widely known as possible the fact that most of the ill-health now prevalent is needless; that a little self denial, a little more attention to the rules of hygiene, a little more living in the open air would cause a large number of the diseases now so common to disappear.

HYGIENE OF HAIR DRESSING AND BARBER SHOPS,

by Dr. Angel Contreros, Pueblo, Mexico.

The disease which persons are most liable to contract in barber shops is scurf, and the author therefore touched on what appeared to him the most important points in the consideration of this matter. Scurf is understood to be a disease of the capillary system caused by the presence of vegetable parasites. The disease can be transmitted by some animals which already have it; but the contagion most commonly takes place from person to person; and in families, in educational establishments, and in barracks the disease assumes an endemic character. Several times the center of this propagation has been found in a hair dresser's or barber's shop and has arisen from the use of instruments which have been badly cleansed. Barbers and hair-dressers ought therefore to be very careful in cleansing the utensils which have served for one person before they are employed on another. All the utensils should be subject to the action of heat for a space of ten minutes in a vessel or receptacle at a temperature of 120 degrees, and the razors in an oil bath.

THE WATER SUPPLY OF CHICAGO, ITS SOURCES AND SANITARY ASPECTS,

by Arthur R. Reynolds, M. D., Commissioner of Health of Chicago, and Mr. Allen Hazen.

The extensions of the various tunnels within the last two years have undoubtedly secured for the city a water less liable to sewerage pollution than was formerly obtained. The available analyses of the water are perhaps inadequate to measure accurately the improvement, but fortunately we can apply that most satisfactory of all water tests, the typhoid fever death rate. The improvements in the water intakes have not all been made at a single date, but if we compare the two years ending September 1892, and September 30, 1893, we find that during the earlier years the shore intakes at Lake View and Chicago avenue were in common use while the four mile tunnel was not yet opened, while for the greater part of the latter year the shore inlets were entirely closed and the four mile tunnel and the one mile tunnel at Lake View were in use. For the year ending Sept. 30, 1892, the number of deaths from typhoid fever in Chicago was 1,790 in total of 26,646, or a percentage of 6.72. For the year end-September 30, 1893, deaths from typhoid fever were 712 in a total of 26,977, or a percentage of 2.64. It is most unfortunfor this comparison that the old supplies were partly in use during the first few months of the latter year, before the four mile tunnel was opened. We may believe that if this had not been the case the comparison would have been still more favorable to the improved supply. It is a well know fact that people using a water supply to which they are not accustomed are often more susceptible to any infection which it may contain in than are those using such water regularly. A striking illustration was furnished by Philadelphia in the Centennial year, when the typhoid death rate was nearly doubled, while in Chicago the present year for the first five months of the Fair period the rate has been less than half as high as for the corresponding month of the preceding year, and for the entire year under consideration, in spite of the vast numbers of visitors continually present, there has been a reduction of over 60 per cent. in the typhoid fever death rate. This reduction is most striking, and it can hardly be doubted that the improvements in the water supply have been the chief if not the only cause. As there is no marked local distribution of the typhoid fever, so there were no exceptions to the general improvement with better water supply. Not a single ward but showed a substantial reduction. Stronger evidence could hardly be produced to show the casual relation between the contamination of the water supply and typhoid fever. The mortality percentages from typhoid fever in a number of cities may be compared as follows: Chicago, 1892, 6.72, in 1893, 2.64; Philadelphia, 1892, 2.22; Boston, 1.22; Paris, 1.01; New York, .90; Brooklyn, .80; London, .49; Berlin, .42. The cities having the lowest typhoid fever death rate, London and Berlin, use only filtered water. London draws nearly all of its water from the two grossly polluted rivers the Thames and the Lee, and, after filtering it, supplies it to a population that is almost free from typhoid fever. It may be a question worth considering by the engineers whether filtration would not be as cheap and effective a means of improving the water supply as the farther extension of the tunnels.

REMOVAL OF PATHOGENIC BACTERIA FROM DRINKING WATER BY SAND INFILTRATION,

by Mr. George W. Fuller, of Lawrence, Mass.

That drinking water is a carrier of some diseases there can be no doubt. Numerous laboratory experiments by many investigators indicate that the bacteria generally attributed to be the specific organisms of typhoid fever, Asiatic cholera, and other diseases live in water for many days. The results of long-continued investigations at the Lawrence Experiment Station show that the typhoid bacillus is able to live in the water of the Merrimac river, in greatly diminished numbers, for a period of at least twenty-four days. Other investigators, using different water and different conditions, estimate the length of life of this germ at from three to eighty days. The duration of life of the cholera spirillum in various waters has been observed to be from two days to seven months. Modern hygiene demands that drinking water shall be free from pathogenic bacteria, and the means by which such water can be obtained are worthy of our most careful consideration.

During the past forty years many filter plants have been constructed in Europe and numerous experiments in the filtration of water have been made particularly during the past decade. This is largely due to bacteriology which enables us to determine the actual efficiency of filters with regard to the removal of bacteria. The operation of many filters is quite satisfactory, as is shown by the low death ratio from those diseases conveyed by drinking water and by the results of numerous bacterial analyses.

In summing up our present knowledge upon the removal of pathogenic bacteria from drinking water, we may state that in addition to the experience of certain European cities, the Lawrence investigations, covering a period of more than five years and including the bacterial examination of more than eleven thousand samples of water, indicate that it is entirely practicable to construct filters that will economically purify and remove more than ninty-nine per cent. of bacteria which may be present in the unfiltered water.

AN EXPERIMENT IN DISINFECTION. HOW AN EPIDEMIC OF PNEUMONIA WAS CHECKED,

by Dr. Jerome Cochran, of Birmingham, Ala.

The paper dealt with an epidemic of pneumonia checked by disinfection. The total number of cases during the epidemic was 93 ; total number of deaths 30, nearly one-third of the cases. The epidemic occurred in the prison at Pratt Mines, Alabama. The prison was divided into three sections, and while the disinfection was going on in one section the conoicts belonging to that section were crowded into the other two sections. The mattresses were taken off, and these together with the blankets were scattered over the floor. Then by means of a force pump and a long hose pipe the ceilings, walls, and the floors with their contents were literally deluged with a solution of bichloride of mercury, 1–1000, until the bichloride solution stood in puddles and ran in rivulets on the floors. The mattresses, etc., were turned over so as to be wetted as thoroughly as possible on both sides. Dr. Cochran has more confidence in the disinfecting power of heat than in the bichloride. The mattresses, blankets, etc., were therefore put into large steam chambers that had been constructed for the purpose and kept there for six hours, after which they were taken out and dried. In the mean time the disinfected wards were thoroughly scrubbed out, whitewashed and fitted up so that they could be occupied again the next day. The convicts, before they were returned to their old quarters, were required to take a bath and put on clean clothes. In one week the epidemic, attacked at the period of its most rapid increase, went out like a fire under a deluge of water.

A CONTRIBUTION TO THE STUDY OF YELLOW FEVER FROM A MEDICO-GEOGRAPHICAL AND PROPHYLACTIC POINT OF VIEW IN THE MEXICAN REPUBLIC,

by Dr. E. Liceaga, President of the Superior Board of Health, Mexico.

The author presented the following conclusions :

1. The places where yellow fever reigns and which can be considered as centers of infection are in the Gulf of Mexico, Vera Cruz, Frontera, Campeche and the Districts on the northern coast of the Yucatan Peninsula, the last named separated by the Yucutan canal from the Island of Cuba, where the fever also reigns. On the great Pacific Coast, which belongs to the Mexican Republic there is not a single yellow fever center.

2. All the Mexican territory on the Gulf of Mexico and on the Pacific Coast is well adapted for the disease when imported.

3. Yellow fever has become epidemic in the following places of the coast on the Gulf : Matamoros, Altamira, Tampico, Tuxpam, Papantla, Misantla, Nautla, Alvarado, Goarzavoalcos Minatitlan Lagang and San Juan Bautista de Tabasco.

4. The epidemic has extended into the interior, but never into places situated more than 1008 meters over sea level.

5. On the Pacific there is not a yellow fever center, but it has been imported into the following places : On the Peninsula of Lower California, La Paz y Todos Santos ; on the Continent, Guaymas, Altata, San Blas, Mansanillo, Santiago, Acaponeta, Puerto Angel, Salina Cruz, Tonala Soconuzco, Tapachula and San Benito, and in the interior in Hermosillo y Culiacan.

6. Immunity against yellow fever is obtained after having had the disease in any of its forms. It is possible that this immunity may be lost at times, but it is seldom the case as it happens with typhus, small-pox and scarlet fever, which may be had by a person who has had them.

7. The Vaccine of Jenner against small-pox and others which science has discovered, authorize us to look for the one that will prevent the yellow fever. The inoculations against this fever which Dr. Manuel Caramona y Valle has practiced with success should be tried on a large scale, in an uniform manner, in order to be able to find out if they are efficacious. If experience confirms it, then they should be made compulsory in the countries where the fever reigns. If they should not prove worthy, then the inoculation of blood serum, as proposed by Dr. Sternberg, from persons enjoying immunity, should be tried on a large scale and in an uniform manner.

8. The purification of the drinking waters used by persons who have to expose themselves to contact with the disease, should be recommended. The purification of the water used on board the ships leaving or calling at infected ports should be proposed.

9. The sanitation of the places which are yellow fever centers should be done at once.

10. To prevent, by means of sanitary police measures, the importation of fever into places where it can be developed.

HOW SHALL OUR LEPERS BE CARED FOR?

by Dr. Benjamin Lee, of Philadelphia, Pa.

The State Board of health of Pennsylvania and the Board of Health of the city of Philadelphia have had some unpleasant experiences with lepers which had led both of these bodies to appeal to the general government to establish a colony or colonies, where these unfortunates might be provided with the comforts of home and medical care and nursing, and at the same time cease to be a menace to the health of those with whom they were thrown in close contact. The United States had only gone so far as to make the affection quarantinable at the seacoast and to order those found suffering from it on arriving vessels to be at once returned to the ports from which they came.

The American Public Health Association elected the following officers:

President—Dr. E. P. La Chapelle, of Montreal.

First Vice-President—Dr. Manuel Carmona y Valle, of Mexico City.

Second Vice-President—Dr. J. N. McCormack, of Bowling Green, Ky.

Treasurer—Dr. Henry D. Holton, of Brattleboro, Vt.

Permanent Secretary—Dr. Irving A. Watson, of Concord, N. H.

Place of next meeting—Montreal, Canada, October, 1894.

Note. Although the gathering was denominated an International Congress of Public Health, very few outside of the members of the American Public Health Association contributed to the proceedings. The bulk of the work was done by the members of the Public Health Association.

MORAL IMMUNIZATION.—Our associates in mind will appreciate the golden words emitted by the great German scientist, Prof. Virchow, in his lecture before the Royal Society in London, and which we give here without commentary.

"Who among us, he said, is not in need of friendly encouragement in the vicissitudes of life? Fortunately, real satisfaction is not derived from the applause of others, it resides in our own consciousness of honest work performed. How otherwise could we remain firm in the assaults of daily life? How could we preserve the hope of progress and final victory in the face of our opponents' attacks and of all the insults never spared to any one who shares in public life? He who has been exposed during a long and active life to public opinion, will certainly stand at last unjust criticisms with equanimity, but this is only the result of a firm faith in the goodness of our cause and in its final triumph. This is our hope in our struggle for the progress of science and art; this is our hope in the struggles for civil and religious liberty; and in this hope we become inured to malevolent attacks. It is a kind of immunization which, I admit, has its great inconveniences, for this hardening to unjust attacks may easily produce a similar indifference to just criticisms, and even more: as a result of the tendency toward contradiction inherent to the human mind, it may lead to indifference toward praise and acknowledgment. Our mind retires within itself, very often dissatisfied with the world and with itself. For who is so much above all attacks that a faint acknowledgment of the justice of the attacks of our opponents should not penetrate the hardest armor of the most obdurate self-esteem? Happy the one who has strength enough to maintain or recover his relation to his fellow-men and to participate in our common labor! Three times happy he who in this task is not missing the acknowledgment of competent fellow-workers!

Thoughts of this kind were filling my mind when with a view of the present occasion I look at my own life and at the history of our science—or, in other terms, the history of our predecessors. How often I found myself in a condition of pusillanimity with a pronounced feeling of depression. And in the history of science itself, what long periods of stagnation, what long interruption it has suffered from the triumph of errors! What saved me, was the habit of work which I never renounced even in the days of external misfortunes, the habit of scientific activity which always appeared to me as a recreation, especially after tiresome and fruitless efforts in political, social and religious fields.—*Ex.*

NUMBER OF BEDS IN THE HOSPITALS OF DIFFERENT CITIES.— New York, 11,000; Brooklyn, 2,000; Philadelphia, 6,391; Cincinnati, 3,000; Buffalo, 1,025; Albany, 447; St. Louis, 2,086; St. Joseph, 849; Kansas City, 516; Omaha, 617; Detroit, 762; Milwaukee, 667; Chicago, 4,684; Denver, 961; St. Paul, 522; Minneapolis, 325.—*Ex.*

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SATURDAY, OCTOBER 28, 1893.

EDITORIAL.

THE PAN-AMERICAN MEDICAL CONGRESS.

For years past American physicians and surgeons have neglected the opportunities, turned their backs upon the schools and clinical advantages of their own country and hastened across the water to sit for a few months at the feet of some *privat docent* whose language they *did* not understand and whose name they even could not pronounce correctly. This apparent lack of respect for and confidence in the institutions of their own country has naturally had a lowering effect upon the estimation in which we are held by citizens of our sister republics of Mexico, Central and South America. More unfortunate still was the fact that those who yearly went abroad for post-graduate study seemed to think that in order to show the great advantages occurring from a course of study in foreign schools it became necessary to decry those of their native land. A species of toadyism not confined to medical men.

The nations of the south not being as well developed as the United States were compelled to send large numbers of medical men abroad in order to secure that culture so necessary to a great or useful medical career. These students might largely have been brought to our shores had our institutions been properly appreciated even by ourselves. But finding that New York, Philadelphia and Chicago were ignored by their own inhabitants and a system of foreign worship inaugurated in every medical center of this country, they naturally turned their footsteps toward Paris, Vienna and Berlin.

Thus year after year have we missed the golden opportunity of planting a host of graduates from our best schools in the midst of our cis-Atlantic sister republics.

Foreign worship and French and German toadyism are not now rampant as in years gone by. It is even conceded by the worst of anglomaniacs that it is possible for one to get a finished medical education in America. Our great post-graduate schools in Philadelphia, New York and Chicago are opening to yearly increasing classes and their practical teaching is filling the country with a host of practical men, whose increased knowledge and power make their services of immeasurable value to their friends. The prodigals who return from Vienna and Berlin find men educated at home very often much their superiors, and often they have to supplement an incomplete and imperfect course abroad by better instruction and more favorable opportunities at home.

We have long needed a great meeting of some kind to present ourselves medically to the nations of the South. Thanks to the energy and patriotism of Dr. C. A. L. Reed, the great Pan-American Congress furnished us the long needed and much desired opportunity. Our best schools and our best men are now thoroughly known in the distant republics of this continent, and we will be greatly disappointed if the knowledge does not lead to a great influx of students out from home in search of post graduate study. Surely they who went through the halls and over the grounds of the University of Pennsylvania, saw a school which for thoroughness of equipment, severity of curriculum, facilities for teaching and number and enthusiasm of yearly matriculants cannot be surpassed if equaled in any city of Europe. If we neglect not the advantages which this Congress and the World's Fair give us, students instead of going from will be coming to us.

Our surgery and gynecology and our obstetrics have already become so successful that the great operators of the old world are ashamed to quote beside it their own statistics, and it has long been recognized and admitted that unless one wishes to study pathology, everything that can be taught of lifesaving measures is here taught better and by better men than in any capital of Europe.

BACTERIOLOGICAL NOTES.

PATHOLOGY AND ETIOLOGY OF DIPHTHERIA.

Klein, in the supplement containing the report of the Medical Officers Local Government Board, London, 1891–1892, continues his investigation of diphtheria. The work of the past year appears to have been directed toward the pathology of the disease with special reference to the differentiation of it from membraneous croup of the larynx and trachea which are frequently associated with and indeed, derived from, membraneous diphtheria of the tonsils and pharynx. Besides these there are cases of membraneous croup of the larynx and trachea which seemingly are not connected as regards time and place, with diphtheria. The author proceeds to discuss the nature of diphtheria, its definitions, and cause. He considers the Klebs-Lœffler bacillus as, without doubt, the cause of the disease, and considers it of diagnostic value. This is in accord with the results of other investigators. Klein proceeds to discuss several cases of true diphtheria with croup and with scarlatina. He found streptococci in considerable numbers associated with the diphtheria bacillus in one case. From his investigations he draws the following conclusions:

1. "Membraneous croup of the larynx and trachea occurring concurrently with diphtheria of the fauces, is *true* diphtheria."

2 "The so-called scarlatinal diphtheria is not true diphtheria."

3. "Diphtheria of the fauces, as also membraneous croup, following some time after scarlatina, are both true diphtheria."

4. "Membraneous croup of the larynx and trachea without diphtheria of the fauces, may be of two kinds:—(a), true diphtheria (he cites case five in his investigation as an example); or (b), genuine fibrinous croup without presence of the diphtheria bacillus and therefore not true diphtheria."

THE IMPORTANCE OF THE SPLEEN IN THE PRODUCTION OF IMMUNITY AGAINST TETANUS.

Tizzoni and Cattani have conducted some very interesting experiments in which they have shown the importance of the spleen in the production of immunity against tetanus in rabbits. Although they could produce resistance in normal rabbits they could not in those that had had their spleens removed. In a more recent paper the authors have added much to the knowledge of immunity against tetanus. With the vaccine which they now have they can produce immunity in rabbits with two injections, the first of five cc, and the second of ten cc. With this vaccine they can render spleenless rabbits (spleens removed eight to fifty days previously) quite as unsusceptible to tetanus as normal ones, and the serum from these rabbits had as marked an immunizing effect as that from control vaccinated rabbits. These results are in accord with those of Orlandi in the case of rabies and by others in case of various other infections but they are contrary to the results first obtained by Tizzoni. At first quantities of immunizing serum which while they were able to protect healthy animals failed sometimes in animals that were weakened by bleeding or disease. In the present or later work, the material was much more powerful and it was also used in large doses.

From the above briefly mentioned results the authors conclude that removal of the spleen, in as much as it modifies the general process of nutrition, may have a certain influence on the development of immunity, an influence which makes itself known when material of limited power is used for immunization: but that the spleen in itself takes no part, direct and necessary, in the process of immunization itself, and that if the substance which actually produces immunity is a product of the animal organism and not the substances actually injected, which seems, however, in the light of recent work improbable, its formation does not take place in the spleen or at least in this organ exclusively. The authors think that the same fallacy led to the mistake of Foas assistant, Cesaris-Dunel who considered that the spleen played an important part in the production of immunity against pneumonia, a result contradicted later by Foa (*British Med. Jour.* Sept. 16, 1893) [In a subsequent number we hope to give a list of several cases of tetanus that have been cured by the use of serum from immunized animals.—Ed.

DISEASES DUE TO STREPTOCOCCI.

In the *Centrablatt f Klin. Med.* August 19,1893,is an interesting article by Goldscheider on the streptococcus. He states that the pathogenic effect of this organism is due, at least to a great degree, to the accompanying conditions of invasion. It is a question whether severe streptococcus infections as in puerperal septicaemia or pyæmia or the pyæmia of diphtheria, are due to an especially virulent streptococcus or whether less harmful organisms are capable of developing more virulent properties. The investigations of the author are led to the conclusion that biological conditions of the animal body are of much importance in regard to the character of the disease produced. Clinical observations have shown that where necrotic tissue is present there is a special tendency to streptococcus diseases. These conditions were imitated experimentally by the author, when putrid cultures of streptococcus were injected subcutaneously into animals. Foci of pus appeared in various parts containing for the greater part pure cultures of the streptococcus. Cultures from the blood and kidneys also revealed that streptoccus and albuminuria was often present during life. The streptococci thus showed themselves to be the metastatic forming element while the bacilli of putrefaction (that were injected with the streptococci in the putrid culture) did not become generalized during life. In this way the virulence of the streptococcus could be increased and streptococci which had lost their destructive power could thus regain it. The local pyogenic properties could also be intensified. Whether this occurs in the human subject is open to question but certainly there is a great resemblance in the conditions. The action of the streptococcus is assisted by the presence of the products of putrefactive micro-organisms. [Perhaps the most interesting part of this work is the further demonstration of the increase in virulence of bacteria by associating them with decomposed material. In 1892 Lesaje and Macargne (*Archiv de Med. Exper.* No. 2, 1892) discovered that *bacillus coli communis* became increased in its virulence when it was associated with diseased organs. The fact is well-known that streptococci are very generally distributed over the mucous membranes and if their septic properties are increased by any pathological change in the membrane on which they live they furnish additional dangers to the animal body. At most care should be taken to thoroughly cleanse all surfaces on which they exist when there is danger of rupture or the development or lodgment of diseased tissue.—ED].

TRANSLATIONS.

THERAPEUTIC HINTS.*

IN CHARGE OF THE TRANSLATOR F. H. PRITCHARD, M. D.

SCOPOLAMINE HYDROBROMATE.

Dr. L. Illig (*Wiener Medizinische Presse No. 38*, 1893), finds this drug to have a more rapid action, even in weaker solutions, than atropine, while in stronger solutions, it produces a greater dilatation of the pupil. Its duration of action, even in the strongest possible solutions, is much less than that of atropine. In case of idiosyncrasy with atropine it is an excellent substitute, as after long use no disagreeable disturbances nor side-action was observed. It is also of service in all those inflammatory ocular affections where atropine is contra-indicated on account of its increasing intraocular pressure. For diagnostic purposes cocaine is to be preferred.

PALPITATIONS IN ARTERIOSCLEROTICS.

Dr. Smakovsky (*La Semaine Medicale,* 55, 1893) recommends, in the palpitations of arterio-sclerotic patients from cardiac weakness, the following formula:

℞	Chloral Hydrate	
	Bromide of Sodium, ana	gms. 4, (ʒj).
	Codeine,........................	cgms. 10 (grs. jss.)
	Water	
	Syrup of Orange Peel ana....	gms. 45, (℥jss.)

A tablespoonful every two hours until the heart becomes quiet.

In case of necessity one may give injections of morphine, $\frac{1}{16}$ gr. After th attack is once overcome then give small doses of digitalis or strophanthus.

AN EPILATORY IN SKIN DISEASES.

Dr. Butte (*Wiener Medizinische Presse* No. 38, 1893), speaks highly of iodized collodion as an excellent epilatory in certain skin diseases, as, for example, sycosis, and in the following formula:

℞	Oil of Turpentine............	gms. 1.5 (gtts. xxij).
	Alcohol	gms. 12 (ʒiij).
	Pure Iodine	cgms. 75 (gtts. xij).
	Collodion	gms. 35 (℥j).
	Castor Oil.........................	2 (gtts. xxx).

Apply once a day, for three to four days, when, on removal, the hairs will be found to have been extracted and adherent to the collodion.

CHLORIDE OF GOLD AND SODIUM IN BRIGHT'S DISEASE.

Dr. Dowkontt (*La Semaine Medicale* No. 55, 1893,) knowing that the chloride of gold and sodium was, at the same time, diuretic, diaphoretic and alterative, was led to try it in chronic parenchymatous nephritis where the skin is always dry and the urine diminished. This treatment he has employed for a number of years, with excellent results except in very advanced cases, or those complicated with hydrothorax or hydropericardium of ancient date. He uses the following formula :

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*From the Foreign Journals.

℞ Chloride of gold and sodium.... gm. 1 (grs. xv).
Water.............. .... gms. 60 (℥ij).
Six to twelve drops of this solution six times a day.

This is the adult dose. When the affection is complicated by gastro-intestinal disturbances it will be well to commence treatment with doses of two drops, and increase the dose as the digestive functions improve. The use of the drug should be continued until complete suppression of the albuminuria *i. e.*, in some cases, for months. The action of the remedy is slow and may require a month before it becomes manifest. It will be seen that the perspiration will increase with a diminution and final disappearance of albumen from the urine. In the writer's cases this amelioration was so great that the patients were able to resume their businesses and be considered as cured. In some of them no recurrence has been observed. Its curative action being very slow it can not be used in uremic cases, where rather drastic purgatives as calomel and jalap would be indicated. The alarming symptoms being removed the chloride may then be given. He permits his patients to follow a mixed diet in case that it be nourishing, easily digested and contain sufficient vegetables which seem to exercise a favorable influence over the organic changes of these patients.

TREATMENT OF ANTHRAX.

Dr. F. Goilav (*Roumaine Medicale* No. 4, 1893) describes a method of treating anthrax which he has used with success in fourteen cases. After washing the region of the carbuncle with a 4 per cent. solution of boric acid, he opens it with a crucial incision extending a half inch into the surrounding healthy tissue. No anæsthetic is necessary except in very nervous and sensitive persons, where three to four injections of a 1 per cent. solution of cocaine may be used. After opening, it is again washed with the boric acid solution and covered with crystallized boric acid over which is laid a piece of sterilized gauze and a bandage. Under the first dressing, which is allowed to remain on for twenty-four hours, the pains decrease in severity, the temperature falls, the general condition ameliorates and sleep and appetite improve. The next day the dressing is removed, the loose necrotic shreds removed, the carbuncle washed again with the 4 per cent. solution and covered with the crystallized acid. The second dressing remains undisturbed for five to eight days. In twelve of the cases three dressings were sufficient to bring about healing in seven to twenty days. Powdered boric acid is less applicable as it forms a mixture with the pus which hinders recovery. The advantages of this treatment are that it relieves the congestion of the tissues, exposes the pus cavity without opening many blood-vessels, is antiseptic and can be carried out without chloroform. It requires but infrequent change of the dressings, produces rapid healing and may be used in any individual or any portion of the body.

OBSTINATE COUGH OF PREGNANCY.

Dr. Tripet (*La Semaine Medicale* No. 55, 1893), in a case of obstinate cough of pregnancy which had resisted all treatment, tried a treatment similar to that used in the incoercible vomiting of that period. The cervix was found swollen, livid, bathed in yellowish pus and with an extensive ectropion. Under the influence of insufflations of iodoform and applications of iodine the fatiguing cough considerably improved and after six applica- of the galvano-cautery to the cervix it disappeared entirely.

ETHER LOCALLY IN INCARCERATED HERNIA.

Prof. Gussenbauer (*Prager Medicinische Wochenschrift* No. 35, 1893), has employed the local application of ether to the hernial tumor according to Finkelstein, in a series of cases. The patient is placed in the dorsal position, with the pelvis elevated, the knees and thighs flexed and, in men, the scrotal sac supported with a cushion, and, then, every ten minutes to quarter-hour, from one to two table-spoonfuls of sulphuric ether are poured on to the hernial ring and the tumor. This is continued until the tensely distended tumor loses its tension and slightly diminishes, which will occur in three-quarters to three hours. As soon as this is remarked, if it does not reduce itself spontaneously, a few manipulations will suffice to do that which chloroform anæsthesia and strength failed to accomplish, the intestine slips with astonishingly ease and loud gurgling into the abdominal cavity. The only exception will be those cases where omentum alone is incarcerated. Out of twenty-five cases etherization was successful in twenty. In three spontaneous reduction occurred without taxis and in one the patient reduced it himself. In the other cases it was easily done with slight manipulation as soon as the sensitiveness of the ring and the tension and volume of the tumor were diminished. Most frequently reduction was done in two to three hours, at the earliest in an hour, and twice in five to six hours. The ether is not the only effectual agent for by elevation of the pelvis for some time, with slight taxis, some hernias were reducible, yet the influence of the ether was noticeable. This method if used soon after incarceration will succeed in the majority of cases and is of especial service in country practice. [Hypodermic injection of morphine ($\frac{1}{4}$gr.) and atropine ($\frac{1}{150}$gr.) into the region of the ring is also of service.—Ed.]

IODIDE OF POTASH IN HEADACHE.

In the *Anales Of Del Circulo Medico Argentino*, Tomo XVI, No. 5, 1893, the iodide of potash, in small and frequently repeated doses is recommended as an efficacious remedy in headache. Two grains in an ounce of water every quarter hour will relieve completely, in a short space of time, frontal headache accompanied by sensations of heat and chilliness, languor, general malaise, repugnance of food and nausea. These headaches are from definite or special causes and may be regarded as sympathetic headache with a slight syphilitic element, which is either hereditary or acquired. The iodide of potash administered in this manner, often exercises a marvelous action.

TREATENT OF LEUCORRHŒA.

Dr. Gallois (*Anales Del Circulo Medico Argentino* No. 5, 1893) speaks highly of the following formulæ in the treatment of leucorrhœa:

℞ Sulphate of Copper, ... 1gm. (grs. xv).
Water, ... 256 gm. (℥viij).

To be used as in injection in chronic leucorrhœa. At the same time a ferruginous tonic and general baths should be prescribed.

℞ Salicylic Acid..................6 gms. (ʒ jss).
Glycerine........................128 (℥iv).
Water ....1 quart.

Dissolve the salicylic acid in the glycerine, over a fire, and then add the water.

To be used in six injections, one each day, in cases where the leucorrhœa is due to inflammation or irritation in the neighborhood of the uterus or vulva.

PHOSPHORUS IN OSTEOMALACIA.

Dr. Steinberg (*Gyógyászat* No. 36, 1893) recommends phosphorus in the treatment of osteomalacia and in the following formula:

℞ Phosphorus.................. 5 cgms. (gr. j).
Cod-liver Oil........... .... 50 gms. (℥j sʒ).

A teaspoonful once a day.

FORMULÆ FOR THE ANTISEPTIC TREATMENT OF BOILS AND CARBUNCLES.

Dr. E. Gourine (*Le Semaine Médicale* No. 56, 1893) has found the following formulæ of value, in the antiseptic management of boils and carbuncles:

℞ Chloroform..................... 30 gms. (℥j).
Essence of Canella............ 10 (ijss) ʒ.
Carbolic Acid................... ⅓ (gtts.xv-xlv).
Camphorated Oil.............. 50 (jss ℥).

℞ Chloroform ....gms. 30 (℥j).
Essence of Cloves. .... gms. 5-10 (ʒj¼ʒjiss).
Beechwood Creasote ......gms. 1-2 (gtts. xv-xxx).
Camphorated Oil..........℥ms. 50 (℥jss).

℞ Sublimate............ 10-30 cgms. (grs. jss-ivss).
Carbolic acid.......... 1-3 gms. (gtts xv-xlv).
Alcohol.......... . . 10-30″ (ʒiijss-℥j).
Distilled Water. ... 90″ (℥iij).

℞ Salicylate of Mercury..cgms. 10–30 (grs. jss–ivss).
Salicylic Acid..........gms. 1-2 (grs. xv-xxx).
Alcohol ....gms. 10–20 (ʒijss-v).
Distilled Water ....gms. 80 (℥ijss).

℞ Biniodide of Mercury..cgms. 10-30 (grs. jss-v).
Tincture of Iodine ,....gms. 1-2 (gtts. xv-xxx).
Glycerine ....
Destilled Water, ana...gms. 50 (℥jss).

A compress soaked with one or the other of these solutions is applied to the furuncle or carbuncle, and, at the same time, subcutaneous injection of one of the following injections is made:

℞ Carbolic acid...... 10-20 cgms. (grs. jss-iij)
Sublimate......... 5 mgms. 1 cgm. (1-15; 1-5 gr.)
Sodium Chloride. 7 cgms. (grs. x.)
Distilled water... 10 gms. (31 jss.)

℞ Carbolic acid...... 10-20 cgms. (gtts. jss-iij).
Salicylate of Soda.
Biborate of Soda... ana, 1 gm. (grs. xv).
Glycerine.......... 2 gms. (gtts. xxx).
Saturated Solution of Chloroform, 8 gms. ʒij).

℞ Iodoform...... 30 50 cgms. (grs. iij viij).
Salol...... ... 5 dgms.-Ug 1 gm. (grs. vijss-xv).
Carbolic acid.. 10 cgms. (grs. jss).
Ether......... 2-4 gms. grs. xxx-ʒj).
Alcohol........ 6-8 gms. (ʒjss-ij).

This treatment has given him excellent results and has prevented employing surgical measures.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE MEDICAL CHRONICLE,

(of Manchester, Eng.) for October. Dr. H. C. Dalton, M. A. M. D., contributes a paper on

Smallpox in its Relation to Vaccination and other Means Designed for its Prevention.

The paper is based on the critical examination of one thousand recent cases and deals with the three preventives of the disease, vaccination, isolation and healthy environment. Of the thousand cases under consideration 35 were fatal, giving a mortality of 8.5 per cent. As the result of his investigations he believes we have good cause for assuming—

1. That primary vaccination, successfully performed, is an almost absolute preventive of smallpox for a few years, and that in the few instances of smallpox that occur, the attacks are almost invariably mild.
2. The preventive effect wears off to a great extent in a few years. After this time it is not unusual for vaccinated persons to take smallpox, but the severity of the disease is on an average much less than in the unvaccinated.
3. Good vaccination marks, except by affording better evidence of the fact of previous successful vaccination, are only superior to bad marks for a few years. After this time, the important evidence is derived from the actual presence of marks and not from their quality.
4. There is a slight superiority of three marks and over as against two marks and under, but the difference is not very marked, and similarly, with regard to foveated as against unfoveated marks.
5. It is very probable that vaccination marks wear out in course of time. Good marks turn into bad marks and bad marks turn into no marks. Consequently, in the young, persons with no marks have, in all probability, never been vaccinated, but in old people, many of the vaccinated will be in this class.
6. Re-vaccination acts like primary vaccination in that absolute protection is procured for a few years only. After this interval, the re-vaccination will have added nothing to a successful primary.
7. The protective power of vaccination does not reach its height for at least three weeks. If, therefore, exposure to infection takes place less than a week after vaccination, smallpox may occur, though probably in a mild form. Even if, however, vaccination be performed just before the outbreak of smallpox, it is likely to be successful, and in this case will probably modify the disease.
8. Persistently unsuccessful re-vaccination denotes insusceptibility to smallpox, though one or two failures may be due to other causes.

The author also discusses the duty of the state in reference to vaccination and preventive measures, such as isolation. He comes to the following conclusions: There should be one central authority, who shall see after removal, disinfection, vaccination and all other matters appertaining to small-pox, with power to compensate persons who will undergo voluntary quarantine or otherwise indirectly suffer from having come in contact with smallpox. This central authority should do its utmost to persuade persons to be vaccinated or re-vaccinated, and it should make that one condition of receiving any compensation; it should have power to visit casual wards, shelters, etc., isolate suspicious cases, vaccinate and re-vaccinate, if necessary, all who receive relief from the parish, all who are placed in institutions licensed by the State, and all persons employed by the State.

The paper also includes elaborate tables compiled from the records of the London hospital ships

The remaining paper is by Ernest S. Reynolds, M. D., (Lond.), M. R. C. P. and is entitled "Some Remarks on the Diagnosis and Treatment of Neurasthenia."

THE PACIFIC MEDICAL JOURNAL

for October. Dr. Edward VonAdelung, in a paper entitled

Bowel Paralysis or Septicæmia?

calls attention to a peculiar set of symptoms which sometimes develops after ovariotomies, and which is sparingly noticed by authors, those referring to this complication using the term "bowel paralysis" or considering if under the head of septicæmia.

The condition referred to is characterized by the development of vomiting, marked tympanites, rapid weak pulse and locked bowels, while the temperature, entirely independent of the pulse, may be high or not. The patient is free from pain, though decidedly collapsed. The vomiting is continuous and before long assumes a grumous character. The pulse runs up in the forties, and there seems to be no parallelism between it and the temperature. The patient is extremely weak and collapsed, but complains of no pain even on pressure over the abdomen. The reason for terming the condition "bowel paralysis" is, that most frequently all efforts to produce a passage of gas or fæces meet with disappointment. And it does not seem wise to use the term "septicæmia," because of the variability of the temperature, and the remarkable fact that as soon as the bowels are moved, which can occasionally be accomplished, all the symptoms immediately abate. If the bowels cannot be moved, the patient dies.

The facts that the post-mortems often disclose healthy abdominal cavities containing no excess of fluid and absolutely no pus, and that the miscrope discovers no characteristic cocci, would seem to exclude septicæmia. Bowel paralysis appears more probable, though its etiology is difficult. The strongest point in favor of this view is the indisputable fact that, if the bowels are moved, all the symptoms immediately and invariably subside. The practical questions bearing on the subject are the etiology and especially the treatment.

All the various means of stimulating peristalsis have been suggested. Martin recommends electricity and massage. Probably these, with the addition of hypodermic doses of strychnine, prove useful. Salines and calomel early in the after-treatment have their warm adherents. Enemata of ox-gall have proven valuable in some cases. But the therapeutics of this complication needs further clinical study before the best line of treatment can be determined.

Dr. Samuel E. Milliken contributes a "Review of the Operative Treatment for the Radical Cure of Inguinal Hernia." (As this paper also appears in *The Buffalo Medical and Surgical Jouraal* for October, it will be noticed under that journal. Ed.)

The other papers in this month's issue are: "Abuse of Digitalis in Cardiac Diseases," by Dr. J. S. Leonhardt; "The Modern Eye," by Dr. W. F. Southward; the report of an "aneurism of the Superior Mesenteric," by Dr. Fred. W. D'Evelyn; and the report of a case in the later months of pregnancy in which there were only "Twenty four Heart Beats a Minute," by Dr. A. E. Baldwin.

THE BUFFALO MEDICAL AND SURGICAL JOURNAL

for October. Dr. George F. Cott contributes an article on

Intubation.

The author states that he does not always consider the operation one of necessity as regards the saving of life, but principally to relieve obstructive breathing. No doubt many children in whose larynx a tube has been inserted, would recover without it, but the agony caused by the want of air, before the child becomes delirious, must be fearful. Therefore he urges that in all cases of laryngeal stenosis, pseudo-membrane or no pseudo-membrane, if life is threatened, insert a tube, and if the child dies, it will certainly die happy. The tube also serves another purpose. In diphtheria, for instance, when the membrane does not extend to the bronchi, the pressure exerted upon the surface of the tube causes maceration of the pseudo-membrane and its consequent expulsion by coughing, thereby preventing its active absorption.

The cause of the second obstruction, sometimes observed after the child has apparently recovered and after the tube has been removed for three or four days, cannot possibly be due to the formation of false membrane, as that cannot develop so quickly, but seems to be caused by the relaxed tissue, and possibly the vocal cords, having been pressed apart for several days, suddenly collapse, and thus shut off the air.

Occasionally, sudden cessation of respiration occurs after the tube has been introduced, caused by false membrane occluding the opening. In that case a small catheter may be passed through the tube to push the membrane out of the way, and while doing this the child will probably die; it is better, therefore, to withdraw the tube immediately, as the irritation attendant upon the manipulation usually causes coughing, and the false membrane is expelled often in sufficient quantity to relieve the stenosis.

The tube may be retained any length of time but it is well to remember that enough irritation may be set up to cause erosion, and finally granulations which occlude the tube, when removal becomes necessary, probably the larynx dilated and a larger tube inserted, which will press on the granulations and cause their absorption. In acute cases stenosis from edema or pseudo-membrane the tube is not left in long enough to produce such an effect. The author makes it a rule, if the child's condition permits, to remove the tube on the third or fourth day and reinsert it if necessary.

The present O'Dwyer gag, or any other, has given more trouble than is convenient, constantly slipping, and even breaking, under the enormous pressure exerted by the jaws of the child. In order to run less risk of being bitten, the author has had a ring made to fit upon the index finger, between the second and third joints, the most exposed part; it is broad above and narrow below. The dorsal surface of the finger, being rather thin, is easily penetrated, while the palmar surface being thick, is not affected. Mobility is not lessened by its use, as is the case with other protectors found in the shops.

The author insists on early intubation, not in preference to tracheotomy, but to give the child a very fair chance to recover, if that be possible; for certainly a small proportion die for want of air, and that is always obviated by the tube. The principal objectivesymptom, among others, which always means obstruction somewhere in the air passages above the bronchi, is a very marked recession at the pit of the stomach at every inspiratory effort, and cannot be overlooked.

Intubation is just as efficient in the adult as in the child and the author advises the use of the twelve year O'Dwyer tube in edema or any other obstruction of the larynx in the adult, if no larger tube is at hand. He advises in such case to allow the thread to remain attached to the tube to prevent slipping. He thinks intubation preferable to tracheotomy in such cases, especially when obstruction is not likely to be of long duration; moreover, no scar is left, as in tracheotomy. Even in chronic stenosis, it seems to be more serviceable than the tracheotomy tube.

Dr. A. B. Judson discusses

The Treatment of Pott's Disease of the Spine.

In the treatment, the end in view is to relieve the bone of the duty of supporting weight and concussion; and to prevent the affected joint from motion, believing that the arrest of these two functions, weight bearing and motion, are essential to good treatment. It is not wise to keep the patient recumbent for the long period necessary. And, since the patient must be up, and, to a certain extent, active in locomotion, our best resort, in the author's opinion, is to take what benefit can be had from the application of a lever making pressure from behind forwards in the neighborhood of the posterior projection, and counter-pressure from before backwards at two points, one above, and the other below the level of the seat of the disease. In a limited sense, this application relieves the diseased joints from the weight of the body while the patient is up and about; because antero-posterior pressure, thus applied, transfers a part of the weight and concussion incident to standing and walking, from the diseased bodies of the vertebræ to the processes, which remain sound.

The apparatus needed is essentially simple, consisting of two parallel uprights, united below by a pelvic band, and diverging at their upper ends at the base of the neck, and curving over the tops of the shoulders. Pressure from behind forward is made by two pads attached to the uprights at the level of the projection, and applied a short distance from the median line on each side. Counter-pressure from before backwards is made below by a strap passing from one end of the pelvic band to the other in front of the pelvis, and above by straps, one on each side, passing from the upper end of the upright through the axilla, to be buckled to the upright. The most important feature of a brace constructed to carry out these views is the use of mild steel for all the metal parts. The use of this material puts in the hand of the surgeon the power to modify the degree and direction of pressure to the changing shape, and to meet the increasing tolerance of the skin to pressure. The reaction of the skin should receive special and constant attention, and gentle and gradually increasing pressure should be made till the limit of comfortable tolerance is reached.

Dr. Samuel E. Milliken contributes a

Review of the Operative Treatment for the Radical cure of Inguinal Hernia.

After having looked up more than three hundred cases of recurrent hernia after various methods, which came under the author's care at the "Hospital for Ruptured and Crippled," he is convinced that the percentage is far greater than the operators are led to suppose by the immediate apparent good results. It is his opinion that too much is expected from the radical operation, owing to the fact that, with all of nature's devices, she has failed to let the structures of the spermatic cord make their exit from the abdominal wall without leaving each subject liable to hernia, no age being exempt. So long as it is not deemed advisable to sacrifice the testicle, the best that we can hope for is to imitate nature and re-establish the obliquity of the canal. This is best done, in the author's opinion, by the method of Bassini, which is as follows. First, the aponeurosis of the external oblique muscle is divided over the cord structures, until the internal ring is well exposed; the flaps are separated from their underlying structures, until the conjoined tendon on the upper and the shelving process of Poupart's ligament on the lower are brought into view. The cord structures and the hernial sac are next lifted out of their bed *en masse*, after which the sac is isolated, opened and tied off at the highest point. Secondly, with the cord held out of the operation field by a blunt hook or the finger of an assistant, the conjoined tendon, on the upper is sutured to the shelving process of Poupart's ligament on the lower, by means of the kangaroo tendon or chromatized cat gut. The author prefers the kangaroo tendon, as the time for absorption is longer, and the sutures are stronger for their size. From four to six interrupted sutures are sufficient to make a firm posterior wall for the cord structures, care being taken not to constrict them at the internal ring.

Thirdly, the obliquity is re-established by bringing together the flaps of the external oblique by a continuous suture of the same material. The skin wound is closed with interrupted catgut sutures without drainage.

Of something over the thirty cases operated on by the author after this method, he has had three recurrences. In each suppuration occurred, and the hernia made its appearance during the first six months. In regard to treatment tho author comes to the following conclusions:

1. Reconstruction is the best method.
2. No drainage should be employed.
3. The use of trusses should be prohibited afterwards.
4. While a certain percentage will recur, the operation is justifiable between four and forty years of age, unless some physical disability contraindicates the same.
5. Where omental or intestinal adhesions exist, and the use of a truss is unsatisfactory, the operation should always be attempted, as the danger from strangulation is greater than that from the employment of an anesthetic.
6. It is advisable to attempt a radical cure in all cases operated upon for strangulation, unless the gut be gangrenous or the patient's vitality too low.
7. Where undescended testes exist, it will usually be found to be complicated by hernia, and at the time the organ is anchored to the scrotum, the inguinal canal should be reconstructed.

The remaining papers in this issue are "School Life and Physical Development," by Dr. Louis A. Weigel; and "Cysts of the Nasal Passages" by Dr. W. S. Renner.

THE AMERICAN JOURNAL OF OPHTHALMOLOGY

for July opens with an article by Dr. A. Schapringer of New York, on

Iritis as a Symptom of Bright's Disease.

Illustrated by a case to which he was called on October 28th, 1890. Dr. Schapringer thus describes it: "I found the patient a man about thirty-five years old, sitting up in a darkened room, his posture and the expression of his face revealing intense photophobia. Before I proceeded to examine his eyes he told me that he had been under treatment for the last three weeks by Dr. Louis Conrad for an affection of his kidneys and that when his eyes began to trouble him, Dr. Conrad had advised that I be consulted.

"The lids of both eyes which were kept closed by the patient were not swollen. He complained of intense pain in his right eyeball, which was extremely sensitive to touch and could not bear the slightest pressure exerted upon it. There was well marked œdema of the conjunctiva bulbi, but not associated with any change of the normal white appearance of this membrane. The cornea was clear, but the aqueous humor was slightly turbid. No precipitate could be made out on the posterior wall of the cornea. The iris looked discolored and dull and the pupil was contracted, but regular in outline. An ophthalmoscopic examination or tests as to the acuity of vision could not be made, beyond the fact that a fog seemed to cover the field of vision of that eye." Dr. Conrad stated there was no history of syphilis in the case but that the patient had come to his office three weeks before, complaining of headache and nausea and looking badly. The Doctor immediately suspected Bright's disease, which suspicion was confirmed by an examination of the urine. "As a local treatment of the eye I prescribed the instillation of a solution of atropia sulphate, gr. i. to ℥ss every two hours. Whilst the patient on the next day felt considerable relief in his right eye, his left eye now began to trouble him in the same way as the right. Under the same treatment both eyes improved and were well in about six days." * * * "The patient's death occurred on December 6, 1890, about five weeks after the first onset of the eye trouble. I learned that two weeks before the patient's demise the sheaths of the extensor tendons of the right hand became inflamed. A few days before the end this inflammation subsided to be replaced by an attack of pericarditis to which the patient succumbed in a uræmic condition. No autopsy was made."

Dr. Schapringer was led to associate the iritis with the kidney disease from a recollection of Leber's case published a few years ago.

The remainder of this number is occupied by a translation from Dr. H. Cohn's work on "Hygiene of the Eyes." It deals especially with that portion devoted to the consideration of

The occurrence of Myopia among School Children.

The details of this elaborate and valuable paper are too lengthy for us to reprint, but the following facts and deductions will be interesting to our readers:

"Myopia is a very widely spread disease. Among 40,000 patients that came into my clinic, 6, 707 were short sighted, that is 16.8 per cent. Mooren observed among 108,416 patients 8,452, 7.8 per cent. suffering from myopia.

"A far better insight into the extent of myopia than reports from eye clinics, is given by researches among school children, and we possess in this regard materials which do not exist in such completeness in the case of any other disease."

"I undertook, in 1865–6 the examination of 10,060 school children in schools of all grades. I found 83 per cent. of emmetropia, 13 per cent of errors of refraction (of this 10 per cent. myopia) and 4 per cent. of other eye diseases. The frequency of myopia is shown in the following table: I noticed in

	Per cent. M.
5 Village Schools	1.4
20 Elementary Schools	6.7
2 Higher Girl's Schools	7.7
2 Intermediate Schools	10.3
2 Realschulen	19.7
2 Gymnasiums	26.2

Therefore among 10,060 children 1,004 M. 9.9 per cent.

From this follows: 1. *That in the village schools only a few appeared short-sighted; that on the contrary, in the city scholols the number of the short-sighted continualy increases from the lowest to the hiyhest school;* that, therefore, the number of the short-sighted stands in direct proportion to the longer strain to which the eyes have been subjected.

2. *That the number of the short-sighted from class to class in all schools increased.*

Also, with increasing age the degree of myopia increases; although the higher degrees of myopia occur more frequently in the first four school years than in the seventh to tenth year of age."

The average degree of short-sighted pupils is constantly increasing from the village schools to the gymnasium.

Dr. Cohn agrees with Erismann in the conjecture that "hyperopia is the normal condition of refraction in the youthful eye, and that only the smaller portion of the cases remain far-sighted. The majority become short-sighted after they have passed through the state of normal sight."

After furnishing a large number of statistics he says "From all the figures given above it only follows with certainty *that in the whole civilized world, in all nations, the number of the short-sighted increases with the demands which their school work makes, and from class to class*" and "We declare ourselves of the opinion that *in the schools everything should be so arranged that it will not cause injury to the eyes.*"

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

MEDICINE.

Eye-Paralyses.

The *Amer. Jour. Ophthalmology* contains a very comprehensive article on the paralyses of occular muscles. The following is a summary:

1. All cases of lateral conjugate paralysis are of central origin.
2. When the paralysis is on the same side as other paralysis, the lesion is on the opposite side of the brain. Such paralyses as a rule are transitory, and follow almost any sudden lesion, and often show themseves as a prevailing position of the eye, and not as a true paralysis, or even paresis.
3. When the paralysis is crossed with the paralyses below, the lesion is in the pons-medulla region.

The above three conclusions are equally true of spasms

4. A gradual development of conjugate paralysis clearly points to the region of the sixth nucleus of the same side as affected.
5. Paralysis of up or down motions, or both motions, indicate disease in the region of the corpora quadrigemina, at the point of exit.
6. Reasoning from anology, paralysis of convergence points to disease in the central gray below the aqueduct, but as yet autopsies are lacking.
7. Picked paralysis of parts of a third nerve strongly suggests central disease, but is not proof of it.
8. A majority of cases of eye-paralysis occur in the syphilitic.
9. A paralysis which changes rapidly, quickly showing fatigue, is probably central in origin.
10. Transitory paralysis in the syphilitic is strongly suggestive of future tabes.
11. An eye paralysis, however simple it may seem, is always a just cause for suspicion of trouble to come, and demands a prompt and thorough examination of the patient.
12. There is no evidence that there is any form of connection between the sixth nucleus and the third except in the cerebrum.

Diagnosis of Inebriety from Apoplexy.

Dr. Mills, in a recent clinical lecture on the case of a man picked up in the street unconscious, remarked as follows:

"This man has no external evidences of fracture, but sometimes without fracture or with concealed fracture, a sudden fall or blow on the head will produce an extra-dural or sub-dural hemorrhage. Such patients are usually unconscious at first, and often regain or partially regain their senses, and again lapse into unconsciousness. One dilated pupil, convulsions, and some hemiparesis, are among the prominent symptoms of such a lesion. The signs and symptoms present do not point clearly to this lesion.

"Other diagnoses to be considered are those of drunkenness, opium poisoning, epilepsy, uremia, and embolism or cerebral hemorrhages, perhaps still others, but these are the most important.

"Profound alcoholic intoxication can be excluded, as this patient is evidently absolutely unconscious, and suffering from profound paralysis, more marked on one side than on the other. In dead drunkenness, while consciousness may appear to be lost, the condition is rather one of extreme stupor or stupidity, and the patient by strong excitants can usually be made to respond in some way, although he may immediately sink again into his stuporous state. The smell of liquor on the breath may help, but this cannot be relied upon, as a patient insensible from any cause may have been drinking. Both sides of the body are equally affected in extreme alcoholic intoxication.

"Several facts will easily exclude opium poisoning, such as the sudden onset, the absence of pinpoint pupils which will not dilate, and the peculiarities of the state of insensibility. As the man was seen at the time of and immediately after his attack, and for other reasons, the post paroxysmal sopor of epilepsy can be dismissed.—*Jour of Inebriety.*

Dawson (Rankin) on Sbocrrhio Eczema.

Under this title Unna includes:

1. Seborrhœa capitis, pityriasis capitis, scurvy, or dandruff.
2. Seborrhœa proper, where greasy crusts are found on the scalp.
3. Lichen circinatus of Willan, or seborrhœa corporis of Duhring.
4. A number of chronic exezmatous eruption affecting the back of the ears and sometimes the folds of the joints, and frequently associated with a scurfy condition of the head.
5. Cases occupying apparently an intermediate position between psoriasis and eczema, well defined and scaly on some parts, less well defined and moist on others.

The writer closes his discussion as follows:

We are then, we believe, justified in concluding—

1. That Unna's "seborrhæic eczema" cannot be regarded as a separate or distinct disease, but rather as an interesting group of affections.
2. That patient in whom the sebaceous system is exceptionally active or exceptionally developed are especially liable to these affections.
3. That eczematous, psoriasiform, syphilitic, and, indeed, almost all eruptions are

likely to be modified in character and appearance in the case of these patients.

4. That the skin of such patients affords an exceptionally favorable soil for the growth of many kinds of parasites, which in their turn tend to modify the character of pre-existing eruptions, or to induce further inflammation.

5. That the treatment of these affections should, in the first instance at least, be directed against this parasitic element when present.

Unna's theory that the seborrhœic affections are dependent largely or chiefly on the sweat glands must, we believe, be regarded as, to a large extent, purely hypothetical and as yet unproved.—*Montreal Med. Jour.*

THERAPEUTICS.

The use of Cocaine.

1. Amount of cocaine used must be in proportion to extent of surface it is desired to anæsthetize. In no case should the quantity exceed one grain and three-quarters.

2. Cocaine should never be used in cases of heart disease, pulmonary disease, or in persons of highly nervous temperament.

3. In injecting cocaine, the intradermic method is preferable to hypodermic. By injecting into, not under mucous membrane or skin, the risk of entering a blood vessel is avoided.

4. During injection the patient should always be in a recumbent position ; in operations upon the nose and throat, the head should not be raised until anesthesia is complete.

5. It is of great importance that cocaine should be pure, since its combinations with certain other alkalies result in poisonous compounds.—*Brooklyn Med. Jour.*

The action of Pilocarpine on Bodily Temperature.

In a series of experiments conducted by Professor Reichert on this drug the Doctor states that the results of his observations justify the following conclusions :

(1) Pilocarpine first increases and then decreases bodily temperature.

(2) Heat production and heat dissipation are first increased and then diminished. Heat production is the process primarily affected, the alterations in heat dissipation following and being dependent upon the effects upon heat production, excepting after very large doses, when heat dissipation may be depressed even more than heat production during the stage of lessened heat production.

(3) The alterations in temperature are dependent essentially upon the actions on heat production, but may be affected by sweating, and after very large doses by alterations in heat dissipation.

The primary increase of temperature is due primarily to an increase of heat production, but after very large doses this increase may be exaggerated and continued by a diminution of heat dissipation which is greater than the depression of heat production.

The decrease of bodily temperature is due to a diminution of heat production, but may, in part, be due to sweating.

(4) The actions on the process of heat production are so much more potent in their effects on temperature than those on the sweat glands, that it is doubtful if the latter ever plays an important part in the temperature alterations.

(5) Bodily temperature may be increased during the stage of diminished heat production, owing to the greater depression of heat dissipation.

(6) The amount of increase and decrease of temperature and the duration of each of these periods are essentially in direct relation to the dose.—*Univ. Med. Mag.*

The Admisistration of Anesthetics.

The following deductions (*Lancet*, No. 3642, p. 1498) have been arrived at by the Commission appointed by the *Lancet* to investigate from a clinical standpoint the subject of the administration of chloroform and other anesthetics: The death-rate under anesthetics has heretofore been unduly high, and may be lowered by improved methods and greater care. Ether is the safest anesthetic in temperate climes for general surgery, when properly given from an inhaler permitting graduation of the strength of the vapor. Nitrous oxide gas should be employed for minor surgery. Chloroform is a comparatively safe body when given by a carefully trained person, but is not in any case wholly devoid of risk. No age or nation is free from danger under anesthetics. The perils of anesthesia, however slight, demand that the undivided attention of a duly qualified and trained medical man should be given to the administration of the anesthetic.

Rules for Passing the Sound.

1. Place the patient in the reclining posture, and make the flexures described—at least flex the thighs.

2. Lubricate the urethra by injecting alboline, or some refined oil; if the oil is not cocainized and it is desirable to use cocaine, it should be first applied.

3. Make the urethra tense by traction.

4. Avoid force; go slow; be patient.

5. Guide the instrument if obstructed in the deep urethra, by the finger introduced into the rectum.

6. All instruments are to be made surgically clean and perfectly smooth.—*Med. Brief.*

Gibby (F. H.) on the Surgery of Childhood.

The principal danger is from hemorrhage, as children bear poorly the loss of blood. But removed from the operating table alive, they are the best subjects. Inflammation rarely passes the degree necessary for repair, while pyæmia is less to be feared. Chloroform is the anæsthetic and properly given is perfectly safe.—*Mass. Med. Jour.*

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ORIGINAL ARTICLES.

CONTRIBUTION TO THE STUDY OF YELLOW FEVER FROM A MEDICO-GEOGRAPHICAL AND PROPHYLACTIC POINT OF VIEW IN THE MEXICAN REPUBLIC.*

EDUARDO LICEAGE, M. D., MEXICO.†

At its meeting held last year in Mexico City, the American Association of Public Health appointed an International Committee "On the origin, causes and development of yellow fever, and the proper means to wipe it out at its birth."

I had the honor to be named as one of the members of this Committee, and I have since received a letter from Dr. Formento, its President, in which he uses the words: "We hope to be able to present at the next meeting a partial report, at least, on this important international sanitary question, and in order to facilitate the work of the Committee, each individual member of the same is urgently requested to give full expression to his views on the subject, and indicate sanitary measures and local reforms or improvements in the reputed habitants of yellow fever, as he considers most effective to bring about the greatly desired object, namely, the stamping out of the scourge in its very cradle."

I have copied the exact text of the words used by the President of the Committee in order to show the manner in which we ought to enter upon the consideration of this important problem, with a view to a satisfactory solution.

If each one of the members of the Committee undertakes to treat the whole of the question he will necessarily have to repeat a great deal that has been previously said by other physicians that have discussed the subject; but if I only undertake the study of a limited portion of the problem, I may, perhaps, be able to throw some light on the subject, and with that object in view, I now propose to present to the Association a brief study containing all the information of a positive character which has been acquired in the Mexican Republic, with respect to the following points:

1. Places which we may consider as *centres* of yellow fever, on the coast of the Gulf of Mexico.

2. Localities in which the yellow fever does not originate, but which present favorable conditions for its development once it has been imported from any other place.

3. Epidemics of yellow fever which have invaded different localities of the Coast, specifying the causes which have given rise to the same, based on exact data in our possession.

4. Immunity which is enjoyed by individuals born in places where the fever prevails with an endemic character, and

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* Read before the International Congress of Public Health, October, 1893.

†Vice-President of the American Public Health Association, President of the Supreme Board of Health of Mexico, Professor of Surgical Therapeutics in the School of Medicine, Director of the Maternity and Infant Hospital.

the manner in which we are to understand this immunity.

5. Inoculations of Dr. Carmona to obtain this immunity.

6. Measure of sanitary police which I consider indispensable to prevent the importation of yellow fever in those localities which favor its propagation and development.

The Mexican Republic is situated to the south of the United States of America and extends between the parallels of 14 and 32 degrees of north latitude, with width covering 30 degrees of longitude, and an area of 2,000,000 of square kilometres. On the west it is washed along the whole of its coast by the Pacific Ocean, which takes the name of the Sea Cortez or Gulf of California in that part which separates the Peninsula of California from the mainland of the continent, and on the east it is washed by the Gulf of Mexico and the Caribbean Sea.

On the Pacific Ocean the Republic of Mexico has 6,250 kilometres of coast, and 2,580 on the Gulf of Mexico.* This enormous extent of coast is considered by Europeans, and even by Americans, to be extremely unhealthy, they having an erroneous impression that on those coasts yellow fever originates and develops in a *spontaneous* manner. I desire to correct this error, by informing the Association that in the entire Pacific coast and in the 3,000 kilometres of coast on the Peninsula of Yucatan, yellow fever *has never appeared in a spontaneous manner.* Neither has it appeared in the greater part of the coast that forms the Gulf of Mexico.

I will now indicate the localities which were considered as centers of infection, for the reason that yellow fever prevails in them in an endemic form.

The City of Vera Cruz, in the port of the same name, occupies to-day the same position that it has had since the year 1599.

The investigations which have been undertaken by physicians and historians have never been able clearly to determine whether the yellow fever originated in Vera Cruz, or was imported from other parts. Many authors are inclined to adopt the latter opinion, and especially Dr. Charles Heinemann, a distinguished German physician, who for many years practiced his profession in that port and from whose interesting works I have taken many of the data for this paper.* However this may be, the fact is that Vera Cruz for more than two centuries has been the most important hotbed of yellow fever in the whole coast. From this point the troops started in 1843, who introduced the disease for the first time in the port of Tampico. The epidemics which ravaged the same port in the years 1847–8, and 1863–4, owe their origin to the same circumstances. In the same way, the disease was carried to Tuxpam in the year 1863, and to Jicaltepec in the years 1861 and 1868. In Vera Cruz the greater part of the epidemics take place in the summer time between March and October, but on some occasions, as in the years 1867–8 and 1877–8, the epidemics raged through the winter.

According to Dr. Heinemann, the port of Alvarado, situated 18 leagues to the southeast of Vera Cruz and near the mouth of the River Papaloapam, is another center of the disease.

Tlacotalpam is a city situated on the left bank of the same river, and at a distance of twenty-five miles from Alvarado. It is also considered by the physician I have mentioned, as a cradle of yellow fever, whilst others† are of the contrary opinion.

Laguna is the principal town on the Island of Camen, and derives its importance from the exportation of dye woods. This is another permanent centre of the disease, which causes numerous victims every year among the foreign sailors.‡

Campeche is the capital of the State of the same name in the Peninsula of Yucatan, and is another source of yellow fever at those times when Federal troops are stationed there, proceeding from the more elevated parts of the country or from abroad. This happened in the year 1865, when two companies of Austrian troops lost the greater part of their numbers through yellow fever. Dr. Patrico Trueba, a distinguished physician who has resided in Campeche for the last 25 years, is also of the opinion that the crowding together of persons who have not gone through the disease, favors the development of yellow fever.

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* Los Estados Unidos Mexicanos, etc,. R. de Zayas Enriques, 1893.

* Estudios sobro la Fiebre amarilla en la costa oriental de la Republica Mexicana por el Dr. Carlos Heinmann, 1879. Work inserted in the Gaceta Medica de Mexico, Vol. XV.

† Drs. Gregorio Mendizabal and Diodoro Contreras.

‡ Op. cit., Page 247.

The City of Merida, capital of the State of Yucatan, which covers the northern part of the Peninsula of the same name, as well as the districts comprised within that State under the name of Unucma, Progreso, Temax, Tizimin and Valladolid, are considered as centers of yellow fever by Dr. Jose Palomequem, a distinguished physician of Merida, and who declares that the disease in that place finds its greatest development amongst the foreigners who have not already had it, the natives of the elevated table-lands in the center of the Republic, and the Indians from the other towns of the same State. Mr. Zayas Enriquez expresses the same opinion.[*]

To the districts of the States of Yucutan which I have above mentioned, Dr.[†] Domingo Orvananos in his recent work adds the district of Motul and Mazcanu as being centres of yellow fever.

The preceding lines will have demonstrated that in the Gulf of Mexico and out of a length of 2,580 kilometres of coast, only that small part belonging to the Canton of Vera Cruz, to the District of Frontera, to Campeche and the northern coast of the Peninsula of Yucatan, can be considered as *centres* of development for yellow fever, as they are in constant communication by sea with each other and with the Island of Cuba. It is to be noted that these last mentioned localities are only separated from the Island of Cuba by a narrow strait, and that it is natural to suppose that the disease was originally imported from that Island.

In contrast to the narrow limits of the centres of infection, we can present the enormous coast line of the Gulf and of the Pacific, where the germs of yellow fever find a fertile soil for their development only when they are transported from those places in which the disease prevails in an endemic form. With the object of rendering my study of the subject more precise and of basing it on exact data, I will now proceed to examine the different points on the Gulf and Pacific coasts from this point of view, taking the greater part of my data from the works which I have already mentioned.

The Port of Metamoros is situated opposite to Brownsville on the United States frontier, and has suffered from epidemics of yellow fever in the years 1858, 1864 and 1867.[‡]

Altamira went through its first epidemic of black vomit in the month of October, 1821, shortly after the arrival in that port of a vessel from Havana. More than fifteen hundred persons, both native and foreign, succumbed during the ravages of the epidemic.

Tampico, on the left bank of the river Panuco, was visited, as I have previously mentioned, by its first epidemic of yellow fever in the year 1843, twenty years after its foundation.[‖]

Tuxpam, on the left bank of the river of the same name, was visited by an epidemic in the year 1838, which was not repeated until the year 1863, and was then imported by vessels arriving from Vera Cruz. It attacked the natives of the locality, the Mexicans newly arrived from the table land and foreign sailors, and it afterwards spread to the villages of Jico and Huauchinango.

Papantla and Misantla were visited by an epidemic of yellow fever of the most deadly character, which was imported by the troops passing through those districts during the revolution of 1876.

Nautla was visited by the epidemic in 1859, and Jicaltepec in the years 1861 and 1868.

Trusting to the information given by Dr. Heinemann, in whose judgment I have the greatest confidence, I give a list of the following towns in which the yellow fever has never appeared within the memory of men:[§]

Santecomapan, La Barilla, Coatzacoalcos, Santa Ana, Cupilguillo, Dos Bocas, Chiltepec, San Pedro y San Pablo, Barra del Rio Palizada and Champoton. According to many other numerous and reliable reports that I have received, the foreign sailors in those parts have hitherto escaped the disease, in spite of the hard work they have to perform under a burning sun, receiving and stowing the goods with which the ships are loaded.

Although the above mentioned author

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[*] Los Estados Unidos Mexicanos. Mexico. 1893.

[†] Ensayo de Geogragia Medica y Climgtologica de la Republica Mexicana.—Dr. Domingo Orvanos.—1889.

[‡] Heinemann. Op. cit.

[‖] Heinemann. Op. cit.

[§] Heinemann. Op. cit.

says that Coatzacoalcos and Minatitlan have not suffered from yellow fever, they were nevertheless invaded by the epidemic in September of last year, the disease being communicated by persons who had arrived from Vera Cruz in the steamer May.*

Frontera has from time to time been visited by mild epidemics, which have attacked both natives and foreigners.

San Juan Bautista de Tabasco had never been visited by yellow fever until the year 1877, when it was imported by the troops under the command of General Enriquez, coming from Campeche and touching in Frontera.

The disease attacked the inhabitants of this town without distinction of race, and afterwards spread to Micaltepec, Huimanguillo, San Antonio, Cardenas, Nacayuca, Jalpa, Pichucalco. Doctor Castanares, who has lived in that locality, believes that the Mexicans, who are natives of the cold country are the first to be attacked by the epidemic, whilst it respects the natives of the State of Tabasco.

I have already mentioned that the epidemic at times spreads from the ports to some of the towns situated within a certain distance of the coast. I now propose to treat, although lightly,of the spread of the disease along the lines of railroads which run from Vera Cruz to Mexico and Vera Cruz to Japan. During the construction of the first mentioned line and as the works advanced, the disease presented itself at all the stations excepting Tejeria, although it is only situated at a distance of fifteen kilometres from Vera Cruz. This station preserves its immunity to this day, whilst in LaSoledad, El Camaron, Paso del Macho and Atoyac a few cases of yellow fever are observed almost every year. But the city situated on this road in which the epidemic presented itself on several occasions, and where it has carried off the largest number of victims, is Cordoba. Situated at a distance of 105 kilometres from Vera Cruz and at an altitude of 827 metres above the sea-level, it has undergone epidemics imported from that port, in the years 1866–7,1876–7, 1880–1 and 1892–3.† In the year 1876,more than two thousand persons perished in the epidemic which spread to many of the neighboring towns and villages.

Following the ways of communication by the road from Vera Cruz to Jalapa, the epidemic was carried to the towns of San Juan and Paso de Ovejas, but never reached Jalapa, which is almost at the same distance from Vera Cruz as Cordoba, but at an elevation of 1,320 metres above the sea-level.

The highest point in which the yellow fever has, up to the present date, been found susceptible of development, is the village of Las Animas, situated between Cordoba and Orizaba, at an elevation of 1,008 metres above the sea-level.

The extensive coast of the Pacific had always enjoyed an immunity from this epidemic, with the exception of short stretches belonging to the States of Michoacan, Oaxaca and Chiapas, which on two distinct occasions had been visited by yellow fever.

In the localities which I am about to mention, all memory had disappeared of an epidemic of this class, if they ever had known such a thing, so that when it presented itself in Mazatlan, the local physicians did not recognize it, believing that it was not a disease special to that climate. Nevertheless, in August, 1883, the Pacific Mail Steamer, "San Juan," arrived with sick people on board who had imported the yellow fever in Mazatlan. The epidemic spread with such rapidity that within five days 3,000 persons were attacked with the disease. From Mazatlan it extended to Guaymas, San Blas, Acapulco, Manzanille and other places. Amongst these latter I would especially mention Culiacan and Hermosillo, on account of the distance at which they are situated from the coast. The epidemic ceased in the month of October in the same year, and has never been repeated. From the preceding remarks, it will be seen that the immense coast of the Republic, washed by the two oceans, is always liable to be invaded by epidemics of yellow fever when it is imported. Matamoras was visited by epidemics in 1858, 1863 and 1867.

As we have already seen, the epidemic appeared in Altamira during the year 1821, after the arrival of a vessel from Havana.

The first epidemic was carried to

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* Report by Don Ignacio Garfias, Inspecting Engineer of the National Railway of Tehuantepec.

† Data furnished by Dr. Gregorio Mendizabal of Orizaba.

Tampica in the year 1843, by troops from Véra Cruz.

To the same circumstance, we attribute the great ravages committed amongst the American troops in 1847–8, who garrisoned that town during the war.

The epidemic was also imported into Tampico during the years 1863–4, by two battalions of the French army. The great epidemic that ravaged Tampico in September, 1878, was imported from New Orleans with a cargo of grain, and acquired its development because it fell on favorable ground, the cyclone which had previously devasted the coast having caused inundations in the neighborhood of the port.

In June of the following year, a large shipment of damaged cotton goods was received in this port, which had been submerged in the sea. These goods were hung up to dry in the rooms occupied by some employes of one of the stores, and this circumstance gave rise to the commencement of an epidemic which lasted until the month of December.

I must here state, that from that date no new epidemic has appeared in Tampico, although isolated cases have been observed in persons who carried the disease with them from Vera Cruz.

Tuxpam was visited by an epidemic in the year 1838.* Dr. Ordozgoiti does not state how the epidemic developed itself, but he clearly declares that the epidemic of 1863, was imported from ships arriving from Vera Cruz. As I have always said, the mulateers carried the disease as far as Jico and Huauchinango. Troops arriving at Tuxam from Vera Cruz introduced the epidemic in the years 1877 and 1878.

Papantla: A detachment of troops passing through this town in the year 1876, brought an epidemic of yellow fever with them which developed the most deadly characteristics.

Nautla: An epidemic took place here in the year 1859.

Jicaltepec: An epidemic appeared in this town in the year 1861, which was limited to the right bank of the River Nautla.† It was also visited by an epidemic in the year 1868.

Coatzacoalcos: The yellow fever was carried to this port in the month of September, 1892, by some sick men on board of the steamer "May" from Vera Cruz.

Minatitlan: The disease was carried to this port at the same time and under the same circumstances as the last one mentioned.

Frontera: From time to time mild epidemics are observed in this town, the disease affecting both foreigners and natives alike.‡

San Juan Bautista: As I have already stated, this port is situated at a long distance from the coast and on the right bank of the River Grijalva. An epidemic raged there in the year 1877, having been imported by Mexican troops which had touched at Frontera on their way from Campeche. From San Juan Bautista the epidemic spread to Micaltepec, Huimanguillo, San Antonio Cardenas, Nacayua, Jalpa and Pichucalco.

Don Francisco Arguelles, who is quoted by Dr. Heinemann, says that the first cases of yellow fever which appeared in Pichucalo, originated in the house of a Spaniard named Bustamante, who had just received a shipment of goods from San Juan Bautista. "These goods were transported up the river in canoes, to a point distant one league from Pichucalco, where they were unloaded and carried to the town by mules. Mr. Arguelles knows nothing of the fate of the canoemen, but he asserts *that all the muleteers* took the disease, A few days after the arrival of the goods all the people living in Mr. Bustamante's house fell sick, and fourteen of them died. From this house the contagion was propagated throughout the whole town, making numerous victims in all classes amongst the residents ; but it was remarked that the Indians who came from the cold country (San Cristobal, Chiapas) succumbed to the disease with *greater facility* than those from the hot country, After a few days the merchandise forming this unfortunate shipment was carried on the backs of Indians to San Cristobal, but on the road itself the porters were attacke by the disease one after the other. The epidemic did not reach San Cristobal, which is five leagues journey from Pichucalo, and its force was greatly diminished by the month of August, although it still continued on a smaller scale till the beginning of December, when it finally disappeared."

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* Heinemann.—op. cit.

† Heinemann.—Op. cit.

‡ Mr. Barnard, cited by Dr. Heinemann.

Dr. Castanares, who has practiced his profession for 23 years in Tabasca, says that the epidemics only appear in that State when there occurs a great crowding of people under unhealthy conditions, as for instance, in a military encampment. Dr. Castanares believes that the epidemic attacks with greater facility the natives of the neighboring State of Chiapas. According to Dr. Orvananos* epidemics of yellow fever have visited the State of Yucutan in the years 1855, 1857, 1881–2 and 1883, and have also appeared in the State of Vera Cruz in the years 1863, 1872, 1873, 1875, 1878, and 1879, and in Campeche in the year 1865. The author does not give any details as to the manner in which the epidemics developed themselves.

Dr. Orvananos speaks of epidemics having appeared in the State of Michoacan, during the years 1813, 1814 and 1860, but I believe that this can only have taken place along a short stretch of coast, as I can find no record of these epidemics. The same remark applies to the State of Oaxaca during the years 1850 and 1857. In the work of this author to which I refer, he simply says, as I have above shown, that in the States of Jalisco and Sinaloa an epidemic appeared in the year 1882, but this assertion is plainly contradicted by Dr. Praslow,† who says:

"The yellow fever was imported by the American steamers, as I will prove further on, for this disease was never previously seen on the coast of Sinaloa, and Sonora, a fact than can be clearly proved by the books which from the time of the Jesuits have been written, and which speak of other diseases, but not of yellow fever."

The epidemic which spread during the year 1883, along the entire coast of the Pacific, is of the greatest interest in view of the question we are now studying. If any previous epidemics had ever appeared, the memory of them was so completely lost that when the first cases of yellow fever presented themselves in the port of Mazatlan, the physicians did not recognize them, founding their doubts on the fact that this disease had never been seen on the west coast of Mexico. Another great point of interest presented by this special epidemic, is found by following up the way in which the disease was introduced, that is to say, by sea. Dr. Praslow‡ maintains that the yellow fever may have been imported from the year 1882 by the steamers of the Pacific Mail which brought yellow fever patients from Panama, who did not land. He proves this assertion by letters from persons who had traveled in the steamer "Colima," on board of which the captain and six stewards fell sick.

The same did not happen in August, 1883. In that month the steamer, "San Juan" belonging to the same company, reached Mazatlan with 33 sick people on board coming from Panama. Some of them landed, and the consequent epidemic spread with such force, that as I have before said, more than 3,000 people were attacked in the port within the first five days, whilst 22 died in only one day. The epidemic rapidly extended itself to other ports on the coast, and visited the ports of La Paz, Guaymas, Altata, San Blas, Manzanillo, Santiago, Acaponeta, Acapulco, Puerto Angel, Salina Cruz, Tonala, Soconusco, Tapachula and San Benito, and in the interior of Hermosillo and Culiacan.‖ A very important fact to be borne in mind, is that in all the territory included between the Yaqui and Mayo rivers which are inhabited by Yaqui Indians under the command of the valiant chief, Cajeme, the epidemic did not put in an appearance. This was due to the energetic attitude assumed by the chief of the tribe, who prohibited all communication with the outside world, either by sea or land, under penalty of death. This fact has the force of an experimental demonstration and clearly shows the sovereign efficacy of isolation as a precaution against the transmissible infectious diseases.

IMMUNITY.

It is a universally accepted fact, that an individual who has once suffered an attack of yellow fever, is exempt from any more, but exceptions can be found to this rule, the same as in the cases of typhus, typhoid fever and scarlatina, but these cases are comparatively rare and they are so with yellow fever. This immunity is acquired after repeated attacks, as well as mild ones, and even when the attacks have been abortive.

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* Op. cit.

† Apuntes sobre la fiebre amarilla en la epidemia que reino en Culiaca en Agosto de 1884.—Culiacan. —1884

‡ Op. cit.

‖ Documents of the Supreme Board of Health of Mexico.

Other persons who also enjoy immunity from the disease, are those who have been born in those places where yellow fever is *endemic.* This immunity is so general that Dr. Heinemann had made use of it to establish the difference between the regions where the disease is endemic and which are in this paper considered as *centres*, and all those other places which present favorable conditions to the development of the disease *when imported,* but in which it does not spontaneously engender. Nevertheless, this immunity is not by any means absolute, as the physician whom I have quoted mentions cases of persons who had been born and had lived in Vera Cruz, and who nevertheless had been attacked by yellow fever. Similar observations have been made by other physicians of Vera Cruz, who are worthy of all credit.

The immunity can in some cases, although very rarely, be lost, when the person who enjoys it has been absent for a longer or shorter period from the locality. The time required to elapse before the immunity is lost is very variable.* Dr. Garmendia relates the case of a relation of his own who was born in Vera Cruz and lived there. He remained in Europe for three years, and on his return suffered an attack of yellow fever that put his life in danger. A gentleman of advanced age who for many years had filled the position of director of the military hospital, was attacked by yellow fever after having passed some years in Jalapa and in the Capital of the Republic.

As I have before stated, Dr. Heinemann considers, that *the immunity of the natives in any locality where the yellow fever reigns in an endemic form, is the criterion to guide us in classifying the endemia.*

"In a town in which yellow fever had been prevalent for many years," he says, "the natives acquire an immunity, but if for another series of years the disease should not appear, the natives will lose the immunity they have acquired." A proof of this is found in what happened where epidemics appeared in 1843, 1847, 1848 and 1853. Up to that time the epidemics attacked both foreigners and natives of the locality, but in the epidemics of 1863 and 1864, the natives had acquired that immunity and therefore escaped. But after the year 1878, they had lost this immunity, as is proved by the fact that Dr. Hegevich, physician of the Military Hospital in Vera Cruz, attended several soldiers who were natives of Tampico, and who contracted the disease in that port, besides the son of a merchant in Tampico who had removed his business house to Vera Cruz.

I venture to give an explanation of this fact, which appears so extraordinary to Dr. Heinemann, whose opinions I have quoted in the preceding paragraph.

Starting from the unquestionable fact, that an individual who once undergoes an attack of yellow fever is afterwards safe from this disease; that this immunity is enjoyed both by those who have suffered from severe attacks, as well as those who have only had slight attacks, and even by those persons in whom the disease had presented itself in an abortive form, taking for granted the fact that in those localities in which the disease had prevailed for many years, the natives acquire that immunity in the course of time, which they afterwards lose if the disease has not appeared for another series of years, we can base the hypothesis, that all those persons who enjoy such immunity have acquired it by previous attacks which have generally been of a mild character, sometimes abortive, or, perhaps, in the earliest infancy. This hypothesis is supported by the practice of many ladies, who finding themselves absent from the localities in which yellow fever reigns in an endemic form, returned to those localities previous to their confinements, with the object of placing their children in a position to acquire that immunity. The idea that I am presenting is not only my own, but is also largely supported by many physicians of Vera Cruz.

The conviction that mild attacks of diseases which can only be taken once in a lifetime, form a safeguard against any graver form of the same disease, is what induced physicians to inoculate persons with a mild form of small-pox, as a precaution against the real and dangerous disease, until the admirable discovery of Jenner demonstrated the possibility of rendering men safe against that terrible scourge. In later years we have seen the wonderful discoveries of Pasteur, and following his footsteps, we have earnest workers from all nations, laboring night and day in patient investigation and scientific experiments, all directed to procuring the immunity of men and animals against certain diseases. This brings me to speak on the question of preventive inoculations.

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* Dr. Garmendia, quoted by Dr. Heinemann.

Neither I, nor any of my colleagues from the Mexican Republic have any experience with regard to the practical results of the inoculations made by Dr. Freire, of Brazil, and, therefore, I shall confine myself to those which have been practiced by Dr. Carmona y Valle, of Mexico. This friend and colleague of mine, published in the year 1885, his clinical lectures on the etiology and prophylaxis of yellow fever, and with the object of procuring the immunity of those persons who might be disposed to contract the disease he proposed to inoculate them under the skin with a mixture of one gram of distilled water to one or two grams of residue of the urine from yellow fever patients, which had been submitted to spontaneous evaporation, so as to obtain a dry deposit. After numerous experiments on animals, Dr. Carmona inoculated himself as well as other persons who voluntarily presented themselves to help him in his experiments. The results having convinced him of the inocuousness of the method, he inoculated persons who were going from Mexico to Vera Cruz, Havana, or the Pacific Coast, which, at that time, was being ravaged by yellow fever. The greater part of the persons inoculated escaped the disease, but a few were attacked and some even died. The experiments were, therefore, not of a decisive character. In order to give it this character, it was proposed to make comparisons of the mortality caused by yellow fever amongst the convicts living in the penitentiary of San Juan de Ulua, on an island in the port of Vera Cruz in front of the city, and the soldiers who should be previously inoculated by this system, from the garrison of Vera Cruz. Both these classes of men are taken to Vera Cruz from the more elevated parts of the Republic, they are not acclimated, and mostly belong to the same social status.

The number of sick people admitted into the civil and military hospitals of Vera Cruz during the months of January to May, 1885, as well as the comparative table of the sick who came from the penitentiary and the soldiers of the garrison, *who had been previously inoculated,* are set forth in the works of Dr. Carmona.* A study of this work shows us "that during the five months of the year in which the epidemic raged, the convicts who were attacked numbered 72, being 41.52 per cent., whilst the number of cases amongst the inoculated soldiers only came to 26 or otherwise 6.84 per cent."

It might be objected that the conditions of life and the moral condition of the persons submitted to the experiment, are not similar, but Dr. Carmona also presents the testimony of 174 soldiers who arrived in Vera Cruz at the end of July of that same year and who had not been inoculated or acclimated. These soldiers came from the State of Tabasco where they had been living in a climate as hot as that of Vera Cruz. This group could very fairly be compared with that which was formed by the garrison of the place, the soldiers of which had been inoculated.

The following were the results: In three months there were 56 cases in the first group or 32.18 per cent., (it must be remembered that in the group of convicts the percentage was 41.62), which makes us believe that if the observation had lasted as long as the other, *i. e.*, five months, the percentage would have reached the 41.62.

From these facts we can infer that inoculation and not the hygienic conditions was what caused the least proportion of cases. Notwithstanding that these facts have been known, no experiments have been made either in the Republic or abroad, but I believe that it is now time to again experiment in order to find out their true value. Had we not been convinced of this, we would have become so by reading what the eminent Dr. Geo. M. Sternberg† says in his review. He says: "According to the results to which we refer, the writer has thought that inoculations as practiced some years ago by Dr. Carmona y Valle, of the city of Mexico, may have rational bases." He adds: "Lacking the knowledge of the infectious specific agent of yellow fever, two methods are presented which may obtain immunity by means of inoculation. The first method is to follow the experiments of Professor Carmona, by which a sufficient quantity of specific toxalbumin of yellow fever is introduced, under the supposition that such substance exists in the blood of patients during the progress of the disease.

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* Lecons sur l'Etiologie et la Prophilaxie de la Fievre Jaune, Mexico, 1885. De quelques faitsrelatifs a la Fievre Jaune, Rapport presente parle Dr. Cormonay Valle.

† Inoculation for contagious diseases. Preliminary report of the Committee of the American Public Health Association.

"The second method is to introduce into the circulation of the susceptible person the antitoxin of yellow fever, which, if we reason by analogy, is to be found in the blood of persons who enjoy immunity. In the experiments made to determine the possibility of establishing immunity by the first method we should propose that the urine shall be evaporated rapidly in vacuum."

As it will be seen, Dr. Sternberg recommends the inoculations of Dr. Carmona. Accepting the hypothesis that the urine of yellow fever patients may contain specific toxalbumin which might produce immunity. This hypothesis is strengthened by the demonstrations of Dr. Bouchard of France, which show that what is so inoculated is eliminated through the urine. As I have demonstrated that the only way to have immunity is by having had the yellow fever, if we succeed—with Dr. Carmona's inoculation—in introducing a substance which shall produce immunity, then we shall have obtained the same results as vaccine in small-pox. With the idea of scientific principles which modern science has reached, the inoculations of Dr. Carmona should be tried again, making the rapid evaporation of the urine in vacuum as recommended by Dr. Sternberg, and as experience has demonstrated that they are harmless, and easy in their technic, they should be made simultaneously in all countries where yellow fever exists or is liable to be introduced. Were results to be published in an uniform manner, in blanks printed for the purpose, by the yellow fever committee, then we would soon find out whether the inoculations have any value or not. If results justify the practice, we shall have obtained immunity for the people who are compelled to live in those places, and if not the second method should be tried, *i. e.*; the one proposed by Dr. Sternberg; the inoculation of blood secured from persons already immuned.

As prophylactic means, I recommend the purification of the drinking water, for Dr. Gavino, Professor of Bacteriology in the Medical School of Mexico, has observed that in Vera Cruz the people who drank well or cistern water or others kept in such a way as to become impure, were more liable to the disease than those who drank the water of the Tampa river when it had not been contaminated. The same professor, on examining the drinking water of Vera Cruz, found an unknown bacterium, which liquifies gelatin and congregates in oval colonies of a yellowish-greenish color which reminds us of the color of yellow fever patients.

He examined the liquid from the intestines and found a bacillus of the same character, but shorter than the one found in the water. This similarity and the fact that bacteria was not found in the liver, spleen, kidneys or blood made him believe that yellow fever is an intestinal disease. Were this to be confirmed, the purification of water would be an absolute necessity. but if it is not confirmed it will be of benefit to those who drink it.

The last subject which I propose to study is the means by which we can prevent the importation of yellow fever. This is a most important point when we consider that if the methods of which we have spoken will some day prevent the disease, the measures which we are going to propose, strictly enforced, will not only prevent the disease from spreading out of the present epidemic centers, which are few, into the great territory of our Republic, which although it does not originate the disease, is very fertile to receive it, but what is still better, the measures proposed will prevent the disease from being imported to our centers in the seasons when there is no fever. This could not be called an ideal, because it is a known fact that many doctors and historians believe that yellow fever was imported to Vera Cruz, our principal center, more than three centuries ago. What happened in New Orleans is the best proof of the assertion, for that port was a center of infection, from whence it was taken to Tampico, as we have already said, and the fever has not shown itself for the last fourteen years, since the port has been closed to vessels from infected ports. The measures which I proposed are founded on the two great resources placed within our reach by hygiene : *Isolation and disinfection*, applied not only to vessels coming to infected ports, but to those leaving the said ports. Having reduced to a minimum the harm which all sanitary measures generally bring to commercial interests and communications, we have not forgotten that *Salus populi suprema est lex.* The measures are as follows : Landing and isolation of the sick ; keeping passengers who may be suspected and who land under observation for seven days and allow those who will not submit to observation to proceed to places over 1,000 meters above the sea level. Disinfection of the ship or the ports which may have become infected. Disinfection of ship's manger and fresh water supplied. Disinfection of all wearing apparel, baggage and merchandise liable to infection, especially packing cases. These measures are not to be so strictly enforced if the ship has no sick on board on arrival, if it has no merchandise liable to infection, or if it has on board a disinfecting apparatus and a doctor.

CONCLUSIONS.

1. The places where yellow fever reigns and which can be considered as centers of infection are in the Gulf of Mexico, Vera Cruz, Frontera, Campeche and the districts on the districts on the northern coast of the Yucatan peninsula, the last named separated by the Yucatan canal from the island of Cuba, where the fever also reigns. On the great Pacific Coast, which belongs to the Mexican Republic, there is not a single yellow fever center.

2. All the Mexican territory of the Gulf of Mexico and on the Pacific Coast is well adapted for the disease when imported.

3. Yellow fever has become epidemic in the following places of the coast on the Gulf: Matamoros, Altamira, Tampico, Tuxpan, Papantla, Misantla, Nautla, Alvarado, Coatzacoalcos, Minatitian, Lagang, and San Juan Bautista de Tabasco.

4. The epidemic has extended into the interior, but never into ploces situated more than 1,008 meters over sea level.

5. On the Pacific there is not a yellow fever center, but it has been imported into the following places: On the peninsula of lower California, La Paz y Todos Santos; on the Continent, Guaymas, Altata, San Blas, Manzanillo, Acaponeta, Acapulco, Puerto Angel, Salina Cruz Tonala Soconuzco, Tapachula, and San. Benito, and in the interior in Hermosillo y Culiacan.

6. Immunity against yellow fever is obtained after having had the disease in any of its forms. It is possible that this immunity may be lost at times, but it is seldom the case, as it happens with typhus, small-pox and scarlet fever, which may be had by a person who has had them.

7. The vaccine of Jenner against small-pox and others which science has discovered, authorize us to look for the one that will prevent the yellow fever. The inoculations against this fever which Dr. Carmona y Valle has practiced with success should be tried on a large scale, in an uniform manner, in order to be able to find out if they are efficacious or not. If future experience should confirm them, then they should be made compulsory in the countries where the fever reigns. If they should not prove worthy, then the inoculation with blood serum, as proposed by Sternberg, from persons enjoying immunity, should be tried on a large scale and in an uniform manner.

8. The purification of the drinking waters used by persons who have to expose themselves to contact the disease, should be recommended. The purification of the water used on board the ships leaving or calling at infected ports should be proposed.

9. The sanitation of the places which are yellow fever centers should be done at once.

10. To prevent, by means of sanitary police measures, the importation of fever into places where it can be developed.

Flying-Fish.

Melville. "I have just been reading that flying-fish have wings; is that true, Aunt Ida?"

Aunt Ida. "Yes Melville."

Melville. "And do you have to catch them with guns?"—*From Harper's Young People.*

COMMUNICATIONS.

SOME PRACTICAL POST-MORTEM POINTS.*

HENRY W. CATTELL,† A. M., M. D., PHILADELPHIA, PA.

1. Get all the anatomical knowledge you can out of every autopsy you make. It is, therefore, usually advisable, especially in the case of females, to perform a preliminary laparotomy. Many surgical operations can be practised upon the body without disfigurement, such as Alexander's operation, oöphorectomy, removal of the ear ossicles, and vermiform appendix, stretching of the sciatic nerve, symphysiotomy, etc.

2. Do not forget to dictate the post-mortem notes while the autopsy is in progress.

3. Respect the feelings of the friends in every possible manner, and always return everything in a private house to its proper place. Be sure to leave no blood marks behind.

4. Be sure you have a legal right to make the post-mortem before you begin. The nearest relative, or the one who is going to pay the expenses of the funeral, should give the consent in writing.

5. Do not take away more tissue from a post-mortem than you are able to thoroughly work up.

6. Try to encourage a demand among the laity for the performance of autopsies.

7. In making an autopsy have a regular method for its performance, which is only to be modified by exceptional circumstances. Finish the examination of each organ in as thorough a manner as possible before the examination of another is commenced.

8. Label all your specimens at once with name of person from whom the specimen is removed, character of the specimen and relations in the body, date, and preservative fluid employed.

9. If you are so unfortunate as to cut yourself, wash the wound with running water for four or five minutes, and then dress antiseptically. Do not, out of bravado, go on with the post-mortem, if there be anyone else present who can complete it.

10. If you are not making the autopsy yourself do not be too forward in making suggestions to the one who is making it; but always be ready to do anything that you are asked to do in connection with the autopsy.

11. Let your medical friends enjoy the autopsy and specimens with you.

12. Get all the posts you can; never refuse to make an autopsy for another, when you possibly can.

13. Tact will get you many autopsies; curiosity of relatives and friends can often be worked upon to get permission for an autopsy.

14. As the object of the autopsy is usually to find out the cause of death, either for legal or scientific purposes, the post-mortem should, therefore, be conducted in as thorough and accurate a manner as possible.

15. In legal cases be sure to protect yourself in every possible way. The jars (which should never have been used) containing the specimens, should be sealed in the presence of a witness. In important cases here in Philadelphia, the Coroner has both of his physicians present at the autopsy, so that the testimony is stronger; and in case of absence of one of the physicians the other can go on the witness stand and the case not be postponed.

16. If you value your peace of mind do not put yourself forward as an expert witness in medico-legal matters. Knowledge which you already have should be freely given to the court in criminal cases, but the court cannot compel you to obtain expert knowledge without your consent.

17. In Germany the legal evidence of a post-mortem held by gas-light has been judged by the court, except under certain peculiar circumstances, to be void.

18. If two persons are lifting the body the lightest weight is at the feet.

19. Chloroform, when placed on a towel and the head enveloped in the towel, will quickly dispose of pediculi capiditis.

20. Many signs of inflammation, especially of the mucous membrane, disappear after death. Remember that red flannel often colors the skin red.

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* Read before Philadelphia County Medical Society, October 25, 1893.

†Demonstrator of Morbid Anatomy in the University of Pennsylvania.

21. Make the undertaker your friend. Do not recommend an undertaker who disapproves of post-mortems.

22. It is a good knife that will keep its edge in more than one post-mortem.

23. Do not jump at conclusions too quickly. Tentative diagnoses alone should not be made until the post-mortem is complete.

24. Always weigh the important organs, and have some method by which you can tell the right from the left organ in case of the double ones. One nick in the left-sided organs and two in the right will readily distinguish them.

25. Wash your hands frequently during the performance of an autopsy so as not to allow the blood to dry on the skin.

26. In opening a cystic kidney be careful that the liquid does not injure the eyes or soil the linen, as when the kidney is opened the liquid in the cyst is under pressure and may squirt several feet.

27. A duct can often be easily followed by making a nick in it, and then introducing a piece of broom stick or a groove director in the direction you desire to dissect. This is especially useful in the ureters and the ductus choledochus communis.

28. In writing the account of an autopsy describe what you see; do not use names of diseased conditions. These should be put in under the head of pathological diagnoses.

29. Urine, or aromatic spirits of ammonia will best take off the odor from your hands. This odor is usually gotten from opening the intestines.

30. Ammonia (also the aromatic spirits) will remove iodide stains; a weak solution of the hypobromite solution will remove carbo-fuchsin and other aniline stains from the hands.

31. Any organ which you desire to save should be placed in a safe place so that it will not be returned to the body and sewed up.

32. The dissecting-room is a poor place to study pathology, on account of the chloride of zinc forming with albumen an insoluble albuminate of zinc.

33. Nervous tissue for microscopic study should not be placed in zinc chloride or in alcohol.

34. Remember that a post-mortem, with the exception of the brain and cord, can be made with a penknife.

35. Remember that the thoracic and abdominal organs can be removed by the rectum or the vagina.

36. Before removing the calvarium have a basin so placed that it will receive the blood and cerebro-spinal fluid.

37. Drawings, photographs, casts, cultures of micro-organisms, and microscopic slides are valuable additions to a well written account of an autopsy.

38. A lesion in one part of the body will often suggest a careful search for a lesion in another part of the body.

39. Do not mistake the normal for the abnormal.

40. Squeezing the gall-bladder after the duodenum has been laid open, will often cause bile to pass out, and the papilla, the ending of the common bile-duct, can thus be demonstrated.

41. Remember that frozen sections of fresh tissue can be cut and mounted in a half hour to an hour.

42. Three hours is none too long in which to make a complete autopsy.

43. Be careful that the first rib does not scratch your hands when removing the tissues in that region. Therefore cover over the cut-ends of the clavicle and ribs with the skin flaps.

44. Blood makes a good glue for affixing labels, and the blood of a person dying from hydrocyanic poisoning makes a most excellent red ink which will keep for years without the addition of any preservative fluid.

45. Remember that after the brain has been removed that the fundus of the eyes can be removed by a circular incision posteriorly, without disfigurement. The inside should then be stuffed with dark colored wool or cloth.

46. In private cases you will be frequently judged of your skill as a pathologist by the neatness with which you sew up the body.

47. If you discover suspicious lesions always stop the post-mortem and report the case at once to the Coroner.

48. Remember in warm weather that the intestines are especially liable to undergo rapid decomposition when exposed to the air.

49. Remember that a railway train or cart may pass over the body and there be no abrasion in the skin more than a brush burn.

50. Remember that the color of organs is frequently changed when exposed to the air by the oxidation of the hæmaglobin. Also that the sulphide of iron frequently discolors organs after death, due to the sulphuretted hydrogen during decomposition precipitating the Fe. of the hæmaglobin.

51. The clavicle can be grasped and moved and the claviculo-sternal articulation thus readily discovered.

52. In removing the cord the following method may be used without disfigurement to the skin of the back part of the neck. Make a circular incision from the middle of the trapezius muscle of the one side, to the middle of the same muscle of the other side, using as the centre of the circle the external occipital protuberance. This will take you in the median line to about the second dorsal vertebra; then dissect away the skin with muscles attached, and elevate this flap with a tenaculum and draw the shoulders backward. A sufficient amount of space will be given to then remove the cord in the usual manner.

53. If the rectus muscle on each side be cut near its origin, in the direction of Poupart's ligament, the abdominal cavity will be much more thoroughly exposed to view than in the ordinary manner. First, however, examine with the finger for hernia.

54. And lastly be honest. Everyone diagnoses lesions during life which are not found at the post-mortem. Even after a most careful post-mortem it is often impossible to tell from what the patient died.

LARGE DOSES OF STRYCHNINE IN THE TREATMENT OF PULMONARY AND CARDIAC DISEASES.*

THOMAS J. MAYS, A. M., M. D.†

From quite an extended experience with the use of strychnine I feel convinced that this drug gives better practical results in the treatment of pulmonary and cardiac diseases than any other single remedy at our command, and it occurred to me that a short discussion of the principles which I have followed in its administration might be of interest to the members of this Society.

It is needless to tell you that strychnine has a more powerful stimulating influence over the nervous system than any other drug in the materia medica, and that besides its general action it has a special influence on the nerve supply of the lungs, heart, stomach, intestines, etc. Now, without going into details, it is my belief that many affections of the lungs and heart are fundamentally dependent on disorder of the nerves which supply these organs, and that the curative effects of this agent in these diseases rest largely on the power which it has in correcting this primary aberration. Over and above this it has been recently shown that strychnine also has the faculty of multiplying the corpuscular elements of the blood, and is therefore, like iron, a blood-builder. A combination of such valuable properties in a single agent makes it apparent on theoretic grounds alone why strychnine should possess such a beneficial therapeutic effect in the diseases which we are here considering, since anæmia is one of their most common complications. In spite of these desirable qualities I believe that we often fail in obtaining its best effects by giving it in doses which are entirely too diminutive. I do not mean to say that strychnine should be given in large doses in every disease to which it is applicable, for such a statement might lead to great harm if it were practically carried to its legitimate end, but these remarks pertain only to those diseases to which reference is made in this paper. The custom of giving strychnine in doses of $\frac{1}{60}$ or $\frac{1}{50}$ of a grain I have discarded long ago, for I feel satisfied that such amounts are comparatively worthless. It is very rare that I begin with a smaller dose than $\frac{1}{32}$ of a grain, and more often with $\frac{1}{30}$ of a grain, and then gradually increase in an ascending scale until I touch the limit of toleration. Strychnine is peculiar in this respect. The length of the ascending scale from the effects of such a dose to a point where the physiological action of the drug begins to develop itself is usually very long, and during the time that this is traversed by the therapeutist a free opportunity is given in which to obtain the full stimulant action of the drug in gradually increased doses. I usually incorporate one grain of strychnine with phenacetin, quinine, etc., and divide the whole into thirty-two capsules, and give one capsule four times a day. This lasts eight days, and then $\frac{1}{8}$ of a grain more of strychnine is added to the whole quantity, which is thereafter increased $\frac{1}{4}$ of a grain every eighth day until the limit of toleration is approached. This varies very much in different individuals. I have a number of patients under my care at the present time who are taking $\frac{1}{10}$ of a grain, and four who are taking $\frac{1}{7}$ of a grain, and one who is taking $\frac{1}{6}$ of a grain four times a day. Most of these patients have been taking the drug from three to seven months continuously. I have seen patients, however, who could not endure more than $\frac{1}{20}$ of a grain four times a day. So soon as the patient begins to show evidence of intoxication the dose is reduced to a point where this is no longer manifested, and then maintained there permanently or again increased after some time. It is possible, however, and this should always be borne in mind, that the dose which was toxic once may in time be taken with impunity. This would seem to show that the poison line of strychnine recedes, and that the drug establishes a certain degree of tolerance for itself. Yet I have met with one case where the administration of the drug was broken off for almost two weeks, and then, on resuming the same dose which was previously taken, marked rigidity of the lower limbs followed after the first two doses.

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* Read before the Philadelphia County Medical Society.

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What, if any, are the untoward effects of strychnine when given in such large doses? So far as I know there are none except its occasional tendency to produce diarrhœa; but at the very worst I do not believe this proneness is very pronounced. In my earlier acquaintance with it I fancied that it aggravated the diarrhœa which is such a frequent accompaniment of phthisis, but my later experience fails to confirm this, since I have seen cases of intestinal tuberculosis get well when strychnine was given in combination with morphine and oxide of zinc. It has been asserted that it causes albuminuria by reason of the high blood tension which it brings about. Of this I have not the least evidence, having frequently examined the urine of patients to whom strychnine had been administered in such large doses for more than a year.

I will now briefly consider in greater detail the mode of giving strychnine in each disease to which it is believed to be applicable. In *asthma* I usually begin by introducing $\frac{1}{20}$ of a grain under the skin, and administer about $\frac{1}{30}$ or $\frac{1}{25}$ of a grain by the mouth four times a day, and gradually increase this in the way above indicated. Hypodermatically it is given once a day or every other day, and if possible in the evening, until there is an approach to the toxic effects of the drug. Suitable doses of phenacetin, quinine, capsicum, and ammonium muriate will enhance its action. So far as my experience goes strychnine must be regarded as the most powerful adjuvant in the treatment of asthma, although we must never lose sight of the importance of treating the diathesis or exciting cause on which the disease often rests, and also of improving the general nutrition.

Bronchitis, whether acute or chronic, is very much benefited by strychnine. It checks the cough, diminishes the expectoration, improves the appetite and puts to one side the whole constitutional relaxation and feebleness frequently present, especially in the chronic form of this disease. It must be given in ascendant doses, and may be combined with benefit with the syrup of hypophosphites or hydriodic acid, or with both.

Strychnine is one of the most useful agents in treating acute pneumonia, whether this is of the croupous or catarrhal variety. I usually begin by injecting $\frac{1}{20}$ of a grain every three or four hours until symptoms of intoxication begin to show themselves. This I have seen to take place on the second and third day of the disease. If the case is a mild one it will suffice to give $\frac{1}{20}$ of a grain every four hours.

I know of no disease which is more eminently benefited by strychnine than pulmonary consumption. Indeed, as a rule, it seems that sufferers from this disease are capable of taking this drug in extraordinary large doses. I have a number of phthisical people under my care at the present time, both in hospital and in private practice, who are taking over half a grain of it a day—a dose which had been reached by a gradual increase of a smaller one. For a more complete description of the use of strychnine in primary pulmonary diseases I would refer you to a paper of mine on this subject, contained in *The Medical News* of July 22, 1893, and the remainder of this paper will be devoted to cardiac and cardio-pulmonic diseases.

In recommending strychnine as one of our most valuable cardiac stimulants a fear may spring up in the minds of many that this drug is put forward for the purpose of displacing digitalis—the old and well tried heart-tonic. That such a suspicion is not altogether groundless when held by those who prescribe digitalis for almost every phase and form of heart disease they meet, is true; but he who looks the question of cardiac therapeutics squarely in the face, feels, although more perhaps from an instinctive than from a scientific standpoint, that the action of digitalis is not interchangeable with that of strychnine, and that each fulfils its own peculiar indication in the treatment of diseases of the heart. Although we may not be able to draw a rigid line of demarcation between the behavior of these two agents, we have experimental evidence to show that digitalis acts more on the muscular and less on the nervous structure of the heart than strychnine. My own experiments demonstrate that digitalis enhances or increases the irritability of the heart muscle, while strychnine depresses or reduces it; and that that the former arrests the heart in systole while the latter arrests it in diastole. It is my belief that the action of these drugs is as dissimilar clinically as it has been shown to be physiologically, and that strychnine is principally indicated in these diseases of the heart which are dependent on a disturbance of innervation, as for example, in simple cardiac weakness and in irregularity and intermittency of its pulsations, while digitalis is preferable in cases where there is a want of compensatory power in the heart muscle, as in valvular incompetency.

Bearing in mind this difference, strychnine should be prescribed when the nerve supply of the heart is enfeebled through auto-intoxication such as is found in the post-paralysis of diphtheria, scarlatina, measles, smallpox, influenza, whooping-cough, and in poisoning from alcohol, lead, mercury, etc.

Irregularity and intermittency of the heart's action are frequently benefited by the administration of large doses of strychnine, and more often than not, do we find that digitalis is utterly useless in such cases. Sometimes the irregularity will remain even under the influence of strychnine, but the symptoms which are dependent on or are a part of this condition, such as pain in the precordium, orthopnœa, oppression of the chest, will improve or disappear, especially if suitable evacuant remedies are used at the same time. This whole disorder I regard as being probably due to a want of power in the discharge of nerve-force of the heart or rather, perhaps, to a lack of nerve-control over the discharge of the muscle force of the heart. This weakness of nerve-power is not only marked in the heart, but it is also apparent in the lungs and frequently manifests itself, especially in elderly people, in a co-existent œdoma of the bases of both lungs.

Moreover, there is often found an irregularity or intermittency of the heart's action in severe seizures of asthma, and I know of nothing which will remove this accompaniment, as well as the original disease, as strychnine in large doses promptly administered, both hypodermically and by the mouth.

Angina pectoris is another paroxysmal disease in the treatment of which strychnine in large doses stands pre-eminent.

Again, digitalis is always regarded as the sovereign remedy in the treatment of valvular diseases of the heart and their sequences, but there comes a period in the life history of every such affection in which digitalis, no matter how much benefit was derived from it before, proves utterly useless. This leads of course to disappointment, and often gives rise to serious suspicion concerning the utility of this important agent. The fault lies, however, not in the drug, but in its improper application. It has done all that could be reasonably expected of it. It stimulated the heart muscle to renewed activity after the valvular rupture occurred. It aided in developing its muscular fibres and restored its former power; but now, for some reason or other, the nervous energy of the patient begins to flag, and the heart-walls commence to relax in spite of the muscular hypertrophy which is present, and digitalis no longer possesses the spurring properties which it once had. The blood dams up in the left ventricle and auricle, the pulmonary circulation becomes impaired, œdema and congestion of the lungs follow, and death is threatened by way of the pulmonary organs. It is at such a time, when digitalis fails to counteract these many incidental complications, that strychnine steps n and shows its superior value as a tonic to the waning nerve energy of the heart and lungs.

PRIMARY PERINEAL OPERATIONS.

MORDECAI PRICE, M. D., PHILADELPHIA.

There is no subject in obstetrics or gynecology that demands our immediate attention more than vaginal tears after delivery. These may be of serious nature, demanding of the attendant skill and training in this branch of our obstetric art but few men have attained, but one in which all must operate. No one can be excused for leaving the work for some one else. It is his to do and at once. If he can get help all the better, but do the operation he must. It is a very common mistake of men attending women in childbed, no matter how difficult or complicated the case may be, to consider his work complete as soon as the child and placenta are delivered and the woman washed and made comfortable in bed. He makes no effort to find out how much damage or injury has been done to uterus, vagina or perineum. He orders a vaginal douche and leaves his case to Providence. Fortunately for the poor woman, Nature does wonders for her restoration.

In bringing to your notice this subject, I desire only to present my own experience and to emphasize the importance of careful vaginal examinations after labor. Injury may occur at any time from the dilatation of the cervix to the expulsion of the child. The cervix may be torn to the opening of the peritoneal cavity; the vagina torn from the cervix, or down the median line and, including the bowel, from the cervix to the sphincter; or the line of rupture may be to the side in the sulci, and extend very deep into and including the sphincter. Most of the sulci tears are inside leaving the fourchette in its natural position and without careful examination after delivery, no one would suspect the perineum had been injured. Yet some of the worst injuries to the pelvic floor are altogether inside, even the bowel and bladder may be opened without any tear on the outside. Then we may have the vagina torn transversely as the head crowds the walls before it in labor. These tears may extend through the entire septum to the bowel, and there are cases where the child has been delivered through the bowel. So you can comprehend the terrible accidents to the soft parts of the mother in labor are to be in the first place avoided if possible and if not, the immediate repair of the injury is demanded as soon as the labor is finished and before the woman is placed in bed for rest.

These accidents depend upon the violence or amount of force used in the delivery, or the conditions of the parts at the time of labor, or to deformity of the mother, size of child or the duration of the delivery. Under this last head will come unavoidable delays and unnecessary haste in the delivery of the child. What might be delay in one case would not be in another, as the conditions of both mother and child may be entirely different. All these conditions must be considered by the attendant who conscientiously does all he can for his patient.

In labor nature should have her own way so far as is consistent with the safety to both mother and child. To treat in any other way than this would be to encourage the very accidents we most anxiously wish to avoid. Many, probably the larger number, of accidents occur in the first labor, and in women about the midway period of menstrual life. These do not bear the pains and suffering incident to maternity with the fortitude of their younger sisters, so that age of the mother in primiparæ should have an influence in our care of the case.

We will take for granted that all has been done to prevent the accident we now propose to repair and there only remains for us to do the work in a most workmanlike manner so as to get the best result.

Immediately after delivery in a patient with ruptured cervix or perineum, the patient should be so placed as to give the best light and be convenient and comfortable to the operator; the parts injured examined and carefully washed with hot antiseptic solution. If the injury be of the cervix, with the aid of a Sims' speculum, the parts should be carefully coaptated with silkworm-gut sutures, shotted and the parts again washed with an antiseptic solution—the best in my opinion being bichloride of mercury. The stitches of silkworm-gut may be left in place with perfect safety until the mother is ready to leave her bed. The perineum should be examined in the same careful manner and closed with the same material (silkworm-gut.) To prevent the frequent handling of the parts during recovery, the stitches can remain for weeks. If silk or thread be used, the stitches act as irritants after the third or fourth day, and should be removed. This is the best way to close a ruptured perineum.

If the rupture is completely through the septum and sphincter, then the sutures are placed a little differently but with the most painstaking care, for in a case of this kind failure means great suffering to the patient and discredit to the attendant. When the rupture extends through the bowel, the finger should be passed into the bowel as a guide and the first stitch should be at least three-quarters of an inch above the tear in the bowel and from that point down four stitches to the inch inserted. Entering the needle a quarter of an-inch from the torn ragged edge, including as much tissue as possible in the grasp of the needle, with the point of the needle in the direction of the opposite side of the operator, emerging at the very bottom of the tear and then entering again at the same point, pass backward at the same angle to the opposite side and emerge at the same distance from the torn edge. If the tear is through the bowel, the stitch should come as near the torn edge as possible. If the tear is ragged, take more of the margin so as to have the stitches as near in line as possible, and as you approach the external margin you will have to place your stitches so as to include the sphincter. Three to four stitches on the outside will greatly help to perfect the operation. The sulci tears should be closed in the same careful manner. The torn surfaces should be washed with hot antiseptic fluid, or at least with hot water, and carefully dried before shotting the silkworm-gut. If all the discharges are removed and the stitches closed with care, remembering that we will have more swelling in primary operations than in the secondary, we will have the most gratifying results. I have never had one fail to unite by first intention. Use care in doing your work and you will never regret primary closure of the tears in childbed, and will be the means of saving many valuable lives from sepsis and the helpless conditions following culpable neglect of the first principles of obstetric and gynecological surgery, as laid down by the best teachers on this subject.

Case No. 1.—Mrs. W., twenty-three years old; married. Patient of Dr. Judd. When married was of slender build and rather a delicate girl. She became pregnant soon after marriage and began to increase in flesh, and at time of delivery weighed some forty or fifty pounds more than at time of marriage. The labor was an exceedingly difficult one and rather protracted. No instruments were used. The soft parts dilated slowly and imperfectly; the child was a tremendous boy with a well-formed, hard head but slightly reduced by the moulding process. Two fingers filled up the external outlet when the head was well down in the pelvis. Dr. Judd fully expected a torn perineum and sent a messenger asking my assistance in its repair. The delivery was already accomplished when I arrived and the perineum was torn clear through both internal and external sphincters, the full length of my finger. Every effort was made by her attendant to prevent injury, but it was one of those cases where nothing can save the perineum; nothing dilates as it should and when the head passes it must do so over torn tissues. Owing to her great increase of flesh it was impossible, no matter in what position we placed the patient, to bring the torn parts into view. A long perineal needle threaded in the usual manner to place the silkworm gut sutures was used. In this case the sutures had to be placed entirely by the sense of touch, the needle carefully adjusted in the needle holder, needle and holder were passed up into the vagina, and the forefinger of the left hand used to find the vaginal surface and direct the point of the needle as far back of the torn ragged edge as possible so as to bring as much vaginal tissue in the grasp of the suture as possible. Then passing the guide finger of the left hand up into the bowel and passing the needle directly through to the bottom of the tear, which at this point only extended to the walls of the bowel, I put as many sutures as possible at this point and as I came down included the margin of the bowel clear to the sphincter, as in the Emmett operation for complete laceration.

One of the secrets of success in this operation is the use of plenty of tissue. The ragged vaginal wall does not need to be trimmed, but closed just as it is found. In shotting the sutures we must remember the parts are torn, not cut; that they have been greatly injured and bruised in the travail; that in the shotting of our sutures we must use great care so as not to make too much constriction of the tissues. Nine silkworm-gut sutures were used in this case and were removed on the eleventh day. Patient's bowels were kept soluble daily. She made a most beautiful recovery, the perineum uniting in every part. Dr. Judd informs me her condition afterward was most satisfactory.

Case No. 2.—While this was a complete rupture of the perineum, it was entirely different from the one just reported. Patient of Dr. Rishel. Nineteen years old, married, suffering from chronic Bright's disease, pregnant with her first baby. When the Doctor was called she was in active labor and in convulsions. The cervix was sufficiently dilated for him to apply the forceps, which was done at once with the patient under chloroform. A messenger was sent for me, but I arrived after the delivery. The Doctor said the patient had been torn but he had not made an examination. His entire attention had been given to the desperate condition of the mother. I carefully examined and found the perineum torn through, and up the bowel for fully an inch above the external sphincter. In this case the wound could be easily exposed and the stitches placed. Seven were used—two above the rectal tear, five in the rent in the bowel and to coaptate the sphincter. Patient recovered very slowly from the convulsions. The wound healed leaving a slight fistula for several days and then closed entirely.

At times one or more of the stitches leave a fistulous tract but they soon close without help. I think the trouble in this case was from the advanced Bright's disease, which left the patient in a debilitated condition that did not favor rapid healing. The stitches were removed on the twelfth day and everything appeared well closed. I have no doubt the condition of her kidneys will prove too much for her recovery.

All tears in the perineum, unless a mere scratch, should be closed carefully at the time of the injury. They give but little trouble to the attendant and cause the patient very little pain as the parts are in a benumbed condition. But if left only a few hours, to close them without ether would be most cruel and the probability of immediate union not so good. All this work should be attended to at once, the instruments necessary—a small needle and thread—can be found in any house, but the best way is to have such instruments with you. Silkworm-gut for sutures and perforated shot and a shot compresser, which is also a needle holder, is the best, requires but little room and can be obtained at slight expense.

Not In It.

He has no enemies, you say.
My friend, your boast is poor.
He who hath mingled in the fray
Of duty that the brave endure
Must have made foes.
If he has none,
Small is the work that he has done.
He has hit no fraud upon the hip;
He has shook no cup from perjured lip;
He has never turned the wrong to right;
He has been a coward in the fight.

—*Selected.*

A SERIOUS GUN-SHOT WOUND OF THE THIGH WITHOUT HEMORRHAGE.

A. O. STIMPSON, M. D., C. M., THOMPSON, PA.

I do not offer this case on account of its being of special interest in a surgical point of view, but on account of its being unique in its occurrence and attended by no serious sequences. On the 11th, day of August 1893, at 5 o'clock P. M., a boy 11 years of age was brought to my office for treatment by his father. While he and several other boys of about his own age, were amusing themselves shooting an old gun, with the ramrod as a projectile (to see how far up in the air the discharge would propel it) the gun was accidentally discharged prematurely and the ramrod was forced through this boy's leg, to one half its length. The leg was transfixed by the ramrod at about 5 inches above the knee joint. The boy said that he was sitting on a stone wall, holding the gun between his knees while loading it, and the gun accidentally slipped downward so that the hammer caught on the edge of a stone with force enough to explode the cap. Strange to say, the ramrod passed through the leg between the first and second layers of muscles without injuring any important blood vessels or nerves or even lacerating the tissue.

I suggested giving the boy chloroform before attempting to extract the ramrod, but as both the boy and his father objected to its employment I got along without it.

After oiling the piece of wood thoroughly with vaseline, with a sudden jerk I pulled the ramrod through his leg in a downward direction, after placing his heel up on a chair. No hemorrhage followed its extraction and after treating the wound with antiseptic dressing and syringing it out daily for three consecutive days with a 10 per cent. solution of carbolic acid, the wound readily closed up leaving no soreness or lameness afterward.

.NASO-AURAL DIPHTHERIA; WITH THE REPORT OF A CASE.

LAURENCE TURNBULL, M. D., Ph. G., PHILADELPHIA, PA.

Diphtheria. An endemic or epidemic infectious disease of specific origin, attacking the mucous membrane of the nose, pharynx, larynx, and ear, and some other parts of the body.

The ear may become affected by way of the Eustachian tube, and an acute otitis media may develop with perforation of the membrana-tympani, with even necrosis of the mastoid bone. An otitis interna is also sometimes observed.

The question of the identity of the two processes, croup and diphtheria, from a pathological standpoint may be considered to be settled in the affirmative so far as to justify the assertion that true croup, or membraneous laryngitis, may be one form of diphtheria.

The etiology of the disease as to whether it is produced by bacteria is no longer in doubt.

It is of this disease in the ear we write —a case in which the diphtheritic membrane spread to the nasal passages, the Eustachian tubes, and the middle ear. It was accompanied by a gray deposit and a fetid brown discharge. The muscles of the soft palate and ear are frequently affected with paralysis in this disease as a secondary result.

I. N., a girl aged fifteen years, in November, 1891, suffered with deafness—five or six years previous she had suffered a similar attack. She recovered from the attacks and had no earache until about February 26th, 1892, when she complained of most severe pain in the ear. The family physician was called in who diagnosed "an abscess in the ear," but a few days afterwards he thought it had passed away. An attack of diphtheria followed, with abdominal as well as ear trouble. The girl became extremely ill, and the physician in charge desired consultation with a specialist. She had been removed to Atlantic City, but became worse and the father requested me to go down with him the next day.

He stated that an endemic of diphtheria was caused by some break in the drain, or was brought into the house by one of the children in the spring of 1891. The malignant sore throat had occurred several times in the family, recurring in some persons. The eldest boy, the father and the mother, and also a domestic had follicular sore throat but no membrane. Four of the children had the membrane fully developed, and a one year old baby had a slight attack. All the children, except the daughter who was taken to Atlantic City, recovered without any bad effects.

The treatment mainly consisted in the use of a solution of peroxide of hydrogen diluted with water, made fresh and kept in a cold place, and used frequently. Internal treatment with calomel, one and one-tenth grain every two or four hours. The treatment proved very successful as all the cases recovered. The drainage was completely overhauled, the traps etc., kept flushed with a solution of sulphate of iron, and the whole house was fumigated.

When I visited the young girl at Atlantic City, March 6th, 1892, I found her under the care of Dr. Marvel, who had treated her most judiciously by the free use of tincture of aconite, etc.

She was in bed, her head was twisted to one side, suffering with intense pain, and it was with great difficulty, owing to the deposit of the membrane along the canal, that I could make an examination of the ear, as the auditory meatus was very tender and swollen. When seen there was active congestion of the membrana-tympani with a deposit of fluid.

After free use of a 20 per cent. warm solution of cocaine, I perforated the membrana tympani twice and allowed the fluid in tympanum to escape and then incised the swollen auditory canal.

Temperature during preceding day had ranged from 100° to 104°. When I left in the afternoon she was much relieved and her temperature and pulse were much reduced.

Not hearing from the doctor for some days, I addressed a letter to him on the 8th, and received a reply which I give:

Atlantic City, March 10, 1892.

"Miss N. seems much improved. The temperature range has been only one degree above normal. She seems very bright and full of fun.

"Unless something at present unforeseen develops, I think she is to have a speedy convalescence. The ear has not given her much pain or concern since the operation, though it is yet considerably swollen in the *external meatus*. I am today using the lime water through a cone of absorbent cotton in the ear; there has not been any suppurative discharge—hence I have not thought it worth while to use the bichloride solution.

"Should any change for the worse take place I will notify you. I am indeed greatly pleased with the prompt and palliative change in her condition."

THE HEIGHT OF MAN.—A French statistician has been studying the average heights of men at different periods of the world's history and has reached some alarming conclusions. The recorded facts extended over nearly three centuries. It is found that in 1610 the average height of men in Europe was nearly 5 feet 6 inches. In 1790 it was 5 feet 6 inches. In 1820 it was 5 feet 5 inches and a fraction. At the present time it is 5 feet 3¾ inches. It is easy to deduce from these figures a rate of regular and gradual decline in human stature, and they apply this, working backward and forward, to the past and to the future. By this calculation it is determined that the stature of the first man attained the surprising average of 16 feet 9 inches. The race had already deteriorated in the days of Og, and Goliath was quite a degenerate offspring of the giants. Coming down to later time, we find that at the beginning of our era the average height of man was 9 feet, and in the time of Charlemagne it was 8 feet 8 inches. But the most astonishing result of this man's study comes from the application of the same law of diminution. It is conclusively shown that in 4000 A. D., the height of the average man will be but 15 inches, and in a few thousand years more the end of the world will come, for men will get so short that there will be nothing left of them.—*Buffalo Express.*

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of September 27, 1893.

DR. T. J. MAYS read a paper on

LARGE DOSES OF STRYCHNINE IN THE TREATMENT OF PULMONARY AND CARDIAC DISEASES.

(See page 713).

DISCUSSION.

DR. LAWRENCE P. FLICK: This is too practical a subject to be permitted to pass without some discussion. There is no drug that has become more popular in recent years than has strychnine just in the class of cases to which Dr. Mays alludes. Whilst we have apparently empirically come to the conclusion that this drug is of very great value in these diseases, I do not know that I have seen a satisfactory explanation of why it is so. There is one peculiar result in the use of strychnine which gives somewhat of a clue to its manner of action. This was not mentioned by Dr. Mays. It is the marked increase of weight that occurs under the use of large doses of strychnine. I do not know of any drug which will produce this effect so rapidly and so satisfactorily. It seems to me to indicate that the real cause of benefit, after all, is possibly the increase of nutrition, and yet why this increase in nutrition from the use of strychnine? It is probable that its effect in stimulating involuntary muscles has a great deal to do with the result. The special action of strychnine is stimulation of involuntary muscles. This is true not only of the muscles of the heart and of the blood-vessels but also of the muscles of the stomach, intestines, etc.

In the treatment of tuberculosis, strychnine is certainly one of the most valuable remedies that we possess. It should be large doses. It, along with many other remedies which go to build up the nervous system and improve the nutrition, are really essential in the treatment of tuberculosis. When we use remedies which build up the nervous system, and with them use the germicides that have lately been introduced, we can obtain very gratifying results in the treatment of this disease which has hitherto been so discouraging. The use of strychnine and other stimulating drugs should be accompanied by the employment of such germicides as have shown themselves to be of value. I have seen recently reports of some excellent results with tuberculin and tuberculidin, and if these reports continue to come as they have, I feel that we can soon approach the treatment of tuberculosis with a great deal more courage than in the past.

DR. CHARLES WIRGMAN: I can give my testimony as to the value of strychnine in asthma. I have a patient suffering with severe asthma, the result of hay fever, taking one-twelfth of a grain four times a day. He is a man of relaxed muscular fiber and rather feeble constitution. He has had these attacks every autumn for some years. I began with one-sixtieth of a grain and increased to one-fortieth, and then to one thirtieth. Observing no toxic symptoms, I increased the dose to one-twentieth and finally to one-twelfth, four times a day, I think with decided benefit to the general nervous tone. I have never observed in this case or in others any accumulative effect of the drug. As far as its influence upon the pulmonary tract is concerned, I have observed no positive action, that is in the sense of an expectorant, but it certainly does increase the general tone so that a patient has more strength to expel the secretion which accumulates. The only symptom that might indicate a toxic action has been a slight amount of spinal irritation, but I have been inclined to attribute this to the semi-recumbent position which he has been compelled to maintain.

DR. S. SOLIS-COHEN: There is no question in my mind that large doses of strychnine can in certain cases be well borne for prolonged periods. In hysterical and other forms of aphonia, and in paralysis following diphtheria, I have frequently given as much as one-fifth of a grain three times a day for several days in succession, having reached this dose by gradual increasement; and I now have under my care a man who has been taking one-tenth of a grain of strychnine three times a day for some two years, and who has at times for short periods taken even larger doses. This is a case of syringomelia with cardiac feebleness. But while I am sure from what Dr. Mays and others have reported, and from my own observations extending over many years, that these doses of strychnine can be well borne and are useful in certain selected cases, I am not one of those who believe that these large doses should be given to every case or to a large number of cases. Both in acute cases and when the drug is to be long continued, I have seen, as a rule, better results from what nowadays would be considered very small doses, namely, about one-sixty-fourth of a grain or one milligramme. The reason for that, I think, is quite clear. In some very interesting researches communicated by Mr. Hodges to the American Physiological Association at the last meeting of the Congress of Physicians and Surgeons at Washington, and in which the effects of exercise and rest upon the ganglion cells of the brains of bees and of sparrows were demonstrated, it was shown that during the periods of activity a certain vacuolation of the gray matter of the nerve-cells was produced; an absolute destruction of the tissue during the physiological process of nervous function. During the period of rest, repair takes place. Strychnine is an agent which above all others stimulates nervous function, and naturally in the process of stimulation of nervous function leads to destruction of nerve tissue. This is, of course, the absolute physical necessity; energy can not only be produced, whether in the body or out of it, by an arrangement of matter—a reduction of existing forms into less complex forms, with liberation of the energy locked up in the complexity of structure. Mr. Hodges also showed some spinal cells from a cat poisoned with strychnine, and called attention to the correspondence between vacuolation in the spinal cells of the cat from strychnine activity and the vacuolation in the brain-cells of bees and sparrows from normal activity; there is no doubt in my mind that the correspondence holds throughout. Strychnine adds nothing to the stores of energy of the patient. Its great usefulness in apparently giving strength to a weak man is due to the fact that it calls upon him for the exercise to the full of such reserve energy as he possesses. It stimulates the nerve-cells to their highest activity, quickly liberating the locked-up energy, and in so stimulating it inevitably uses up a certain amount of nerve tissue. If after this, sufficient rest is allowed, repair takes place, and takes place more quickly because the nutritive processes have been stimulated by the action of the drug. Now, if the amount of activity with concomitant reduction of nerve tissue caused by strychnine can be proportioned to the needs of the patient so nicely that we shall get the maximum of stimulation of the nutritional process and the minimum of expenditure of the patient's nerve tissue, it is evident that that is the proper point at which to stop. Pushing it beyond that, we may cause an unnecessary expenditure of energy and loss of tissue which has to be made up from the food and in other ways. The nicety of adjustment most beneficial is not to be expressed in figures; it differs with the patient and with the disease, and to reach it requires careful observation and good judgment. Still it is something that we should aim at and that every intelligent physician should be able to secure. The fact that we do not kill a patient by large doses of strychnine does not necessarily prove that we have done him good. The fact that a patient is not killed by a surgical operation does not prove that the operation was indicated in that particular case. It may have been or it may not Dr. Mays has alluded to the tolerance finally produced to large doses of strychnine. In this lies, I think, the patient's safety. The nerve cells become habituated to it, and refuse to respond up to a certain point. It is the small excess beyond this point that is over the amount tolerated, to which the therapeutic effect is due.

In the treatment of acute pneumonia strychnine is unquestionably one of the best agents that we possess, given in proper doses. I have had occasion to observe at the Philadelphia Hospital, in patients side by side, the comparative effect of small and large doses, and while admitting all the difficulties in the way of drawing conclusions from such comparisons, I am sure that the patients with small doses did at least as well as those who received large doses. I am not afraid to push strychnine up to one-half a grain, if necessary, and when the indication for such dosage exists. In Dr. Mays' cases I have no doubt that large doses were indicated, but in less skilful hands than Dr. Mays' I am sure the routine use of large doses might do harm, not by producing immediate death, but by gradually exhausting the nervous energy of the patient.

In acute cases the best method of administration of strychnine is by means of dosimetric granules. I use the word "dosimetric," not that there is anything magical in the term, but that it indicates the manner in which the granules are prepared. Strychnine arseniate in doses of half a milligramme ($\frac{1}{128}$ grain) can be given and repeated every fifteen minutes or half an hour until the desired physiological or therapeutic effect is produced. The administration can then be stopped, and, as the effect is often prolonged, need not be repeated until the next day. In some cases the nurse can be instructed to administer three or four granules—one granule at a time—at intervals of half an hour, and then none for three or four hours. Sometimes, after a patient has thus been given four granules ($\frac{1}{30}$ grain), the effect can then be kept up by a single granule twice or three times a day. As I have elsewhere published my views concerning the important place of strychnine in the treatment of affections of the heart, I will not now dilate further upon it.

To repeat what I more particularly desire to contribute to the present discussion, I believe that while strychnine is very useful in all the conditions described by Dr. Mays, the best effect can be obtained by limiting the dose to the smallest quantty that will produce the physiological reaction intended.

DR. MAYS: I do not know that I have much to say in conclusion. The remarks made by Dr. Flick with reference to the influence of strychnine on nutrition are very apropos. The reason that I did not allude to this was because I have discussed this part of the subject in the paper to which I referred. It is quite evident to my mind that Dr. Flick has had a plentiful experience with the use of large doses of strychnine, because, among other things, he notes the influence of this drug upon nutrition. This action is certainly remarkable. I have so often observed this gain in weight that it is a common thing for me to expect the patient to gain in weight if he gets strychnine in ordinarily large doses, such as I have spoken of. I do not know whether Dr. Flick is correct in saying that it acts upon the trophic nerves, However, there is strong evidence for believing that strychnine affects the trophic or nutritive nerves of the body and stimulates them, and in this way improves nutrition. I have seen remarkable gain in weight in experimental cases in which nothing was given but strychnine hypodermatically for a number of days. There was nearly always decided gain in weight in the cases that I have observed. I gave it in large doses.

In regard to the cumulative effect, I do not think that I have any observations in regard to the accumulation of the drug in the system. While I believe that strychnine acts like drugs that do accumulate in the system, such as atropine, digitalis, and strophanthus, yet there is a marked difference between the action of strychnine and the drugs mentioned. Strychnine does not have the profound effect upon the circulation that the other drugs have. We know that the cumulative effect of digitalis is due to the fact that elimination is checked.

I am sorry that I cannot agree with Dr. Cohen in regard to the benefit of small doses in many diseases, although I believe that some diseases are more easily influenced by strychnine than are others. I believe, however, that pulmonic and cardiac diseases, such as were only referred to in my paper, are less easily influenced by strychnine than are many others. It is especially so in asthma, angina pectoris, and the other pulmonary and cardiac diseases to which I have referred, for in them it is perfectly useless to give small doses with the idea of cure. You might as well turn a garden-hose on a Chicago fire as to expect to do much good with small doses in these diseases. I have tried small doses without any benefit.

In regard to the destructive action to which Dr. Cohen has referred, I can hardly believe that strychnine in ordinary physiological doses can have a destructive influence upon the nervous system, although I can see how a large and poisonous dose could have such influence upon the nervous system. Indeed, we well know that atropine, digitalis, alcohol, and many other drugs in common with strychnine have such a disintegrating effect in toxic doses; but to say that in stimulant cases they have the same or even a similar effect is far from the mark. It seems to me to be a confounding of the physiological with the pathological effects of a drug. Although I administer strychnine in large doses, I always remain within the sphere of its stimulant action. In fact, I fail to conceive how any drug which improves the nutritive state of the body can at the same time have a destructive influence on any tissue, except in so far as it may enhance the physiological waste of the body, which in turn is compensated by an increase in its physiological repair.

CORRESPONDENCE.

SOME MEDICAL PHASES OF THE WORLD'S COLUMBIAN EXPOSITION.

To The Editor:—Perhaps the greatest menace against the success of the World's Fair which has just come to a close, was the prospect of cholera which has for two years threatened to invade this country. An epidemic of a disease so deadly and so greatly feared, would have caused financial difficulties which in themselves would have reduced the number of exhibitors and of visitors. Still more would the dread of meeting infection in a crowd have acted to prevent a profitable attendance. As a nation, we must be thankful that the failure of so noble a commemoration has not been added to the disastrous consequences of an epidemic at any time.

The managers of the exposition had before them the sanitary problems of a city of several hundred thousand inhabitants, limited to an area of about a square mile. The water at the dead end of Lake Michigan is appreciably contaminated by the sewage of Chicago, Milwaukee and several lesser towns, with an aggregate population of two millions or more. This water would be especially unwholesome to strangers without even the partial immunity of habit and forced by the exertion of sight-seeing in the heat of summer to drink unusual quantities of fluid. Hygienic need and business acumen lent themselves to each other's service in solving that part of the sanitary problem which had to do with the water supply. At short distances through the grounds and buildings were erected large filters, and no one who drank water could fail to have impressed on his mind the fact that these filters removed all impurities including germs, but left the natural salts and gases in the water. Almost equally ubiquitous were fountains which dispensed mineral water by means of a penny-in-the-slot machine.

Equally imperative with the need for an abundant water supply was the demand for water-closets. This was met by an elaborate sewerage system which, however, did not require the expense of construction of a permanent system. The management has been severely criticised for allowing the closets to be made a means of revenue. Certainly it is not magnanimous thus to take advantage of the calls of nature, but, on the other hand, five cents is not a large sum to pay for the use of a neat toilet room with soap, water and towels, and at least half of the pay closets were associated with free closets, although the latter were made as inconspicuous as possible.

An emergency hospital with a staff of physicians and trained nurses and equipped with an ambulance, was a novel and commendable provision for the comfort and safety of the patrons of the fair.

Equally convenient and, happily, more largely used was the *creche* in the Children's Building, where a hundred babies and little children were daily entertained. A great many foolish parents said they could never think of checking their little darlings as they would a satchel and so lugged them about, a discomfort to themselves and a nuisance to everybody else.

Through the courtesy of the matron, I was allowed to inspect the rooms where the children were cared for. In the first room were cradles, cribs and swings full of babies and two or three were playing in a little enclosure. Most of the children were happy, a few were screaming with hunger owing to the brutality of their mothers who had failed to return hours after the time for nursing. As far as practicable, children who had been weaned were given their accustomed food, condensed milk, infant's food or prepared cow's milk. In many cases it was necessary to modify the unhygienic regimen to which the child had been subjected and to give the parents a little wholesome advice as to the capability of an infant's stomach. The older children were in a separate room from the babies and were fed in a special dining room. The *creche* was visible from the center of the building through huge windows which were crowded with faces, the spectators in front being pushed down by those behind so that their bodies were out of sight. Looking out on this mass of human faces through the bars of the windows I could appreciate the feelings of the caged animals in a menagerie.

Near the children's building was a well appointed drug store in charge of women pharmacists. This was at once an exhibit of women's work and a practical convenience. Under the same roof was a model hospital ward, diet kitchen and operating room. The last contained a glass topped operating table, a galvano-faradic switchboard and quite a complete stock of metal handled instruments, dressings and a steam sterilizer. The room was floored and walled with tiles and was a silent argument in favor of asepsis rather than antisepsis. One corner of the model hospital represented a children's ward, the rest a woman's ward, and a large doll in one of the beds illustrated the dressing for fractured jaw. In a cabinet were a number of dolls dressed in the uniforms of the various training-schools and outdoor nursing guilds of Chicago. The blue and white striped seersucker dress and mob cap predominated. The heavily frilled and starched abomination which does duty for a cap in most of the Philadelphia hospitals was not represented. The diet kitchen was well appointed. Of particular interest was an appliance which made use of resistance to an electrical current to generate heat for cooking. The power was furnished from a lighting wire and a number of heat generators to fit different utensils were connected with a switch-board. These means of cooking are neat, convenient, prompt and—expensive.

In the Transportation Building there was little of medical interest barring doctors' buggies, one or two elaborate hearses and an ambulance car such as was used during the civil war. The last had on each side of the aisle four lengths of berths arranged in three tiers like those in some steamer state-rooms.

In the section devoted to charities and corrections in the Anthropological Building were a number of hospital exhibits. Models of iron beds, cases of bandages and dressings, photographs of nurses, house-staff and attendants, and of rooms; note-books showing the progress of the training schools were among the articles on exhibition. One hospital exhibited a large scrap book filled with blanks of all descriptions. Prescriptions and diet blanks, temperature charts, blanks for reporting deaths, cards for notifying relatives of the serious illness of a patient and passes were among the more useful minority of the blanks. The majority provided for the details in the routine of various departments of the hospital and for a good many emergencies as well. One can scarcely refrain from the suspicion that a hospital with so elaborate a system of red-tape must fail in some of the more essential functions.

Japan, Canada and the United States showed models of disinfecting ovens in use at quarantine stations. All were on the same general principle of a separate boiler-house, with steam conducted in pipes to a large air-tight building of brick and iron into which freight cars could be pushed and the baggage loaded upon them disinfected.

A Michigan sanitarium made an interesting display of gymnasium appliances and of life size and minature models of patients and nurses showing methods of bathing and massage.

Also in the Anthropological Building were exhibits of papier maché models, not only of the human subject but of various animals and plants. One large case was filled with bleached bones showing the union of fractures. Another case contained a collection of dental specimens and there were interesting remains of bone disease.

One interested in craniology would have found much to engross his attention in the collection of skulls from Peru, the Cliff Dwellers and various American aboriginal tribes.

In the gallery were models and sections of the brain and cord, and apparatus for testing the acuteness of the senses and nerve conduction. Unfortunately, I saw these exhibits only in the evening when they were not in operation, but learned from notices that the tests were conducted on the European plan, ten to twenty cents for the simpler ones, fifty cents for a determination of the psychic power, the last charge including a number of items arranged as on a bill of fare.

Dr. Sternberg had a large number of photomicrographs illuminated by an electric light. Bacteria of various kinds are represented under high magnifying powers. Carmona's bacillus, bacillus acidoformans, Freire's micrococcus, bacillus cumculicida and bacillus racemosus and a number of others besides the usual stock pieces of tuberculosis, pneumonia and gonorrhœa were here shown.

In the gallery of the Manufactures and Liberal Arts Building, were exhibits of dental, medical, surgical, microscopical and veterinary instruments and of drugs. These exhibits simply reproduced the ordinary stock of well supplied dealers, but the fact that they were in charge of intelligent and courteous exhibitors afforded a refreshing contrast to the indifference displayed by the managers of industrial exhibits, who seldom took pains to explain their wares and often left them unattended.

In the agricultural section of the Government Building were preserved specimens and wax models of organs affected with tuberculosis, glanders, hog cholera, Texas fever, contagious pleuro-puemonia and rinderpest. There was a most realistic model of a poultry-yard with chickens dying of gapes, but the most valuable object lesson—on account of possible human infection—was a full sized model of a horse suffering from glanders and farcy. The look of utter wretchedness in the eye, the muco-purulent discharge from the nostril, the hard and suppurating farcy buttons were faithfully shown. It was a clinic of this interesting and rare disease without the danger of infection. The omniverous habits of some cattle were illustrated in a unique collection. Here were hair-balls from stomachs, enough to supply this article of the homeopathic materia medica for all time. A steel rake-tooth about four feet long was said to have been taken from a steer killed at Chicago for beef and, therefore, presumably healthy in spite of this feat in deglutition. A silver dollar, a watch chain, hair-pins, an open jack-knife and quantities of nails and smaller metal articles had been removed from the stomachs of other cattle. In a glass jar were nineteen pounds of stones, varying in size from that of a chestnut to that of an apple and representing the yield of one bovine quarry.

In the division devoted to the treasury department, the U. S. Marine Hospital Service made a creditable exhibit of ward and laboratory appliances.

The Smithsonian Institution, among other things, exhibited many skeletons and models of the internal arrangement of both vertebrate and invertebrate animals, showing the course of evolution. The comparative morphology of the human and the equine skeleton was well shown; as was also the formation of the limb bones, the latter illustrating a number of different quadrupeds, birds, tortoises etc.

Much more might be said in enumeration of the Columbian exhibits which appeal particularly to the consideration of the physician, both in multiplying examples and in giving details. I will close, however, by mentioning a little relic in the Louisiana State Building which suggests a pathetic story of a friendship unbroken by death. This relic was a little silver snuff-box found clasped in the hand of an English army surgeon, who was killed in the battle of New Orleans by a chain-shot, which pinned him to a tree. On the cover of the box was engraved "Captain Arthur Mabbitt to Richard Williams, M. D., 68th Light Infantry," At the doctor's feet lay the body of Capt. Mabbitt who had been killed by a mortar ball.

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Buffalo, N. Y.

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SATURDAY, NOVEMBER 4, 1893.

EDITORIAL.

MATERNAL IMPRESSIONS.

"Is it all right, Doctor?" "Is the baby marked"? is almost invariably the second question asked by a mother after delivery—the first being as to sex. The question is the result of the popular belief in the influence of maternal impressions on the fœtus *in utero*.

Physicians are divided on the question though few now accept 'impressions' as the causes of gross physical deformities.

As to the transmission of parental acquired characteristics the subject is more intangible and therefore more interesting. Dr. Andrew Wilson in a recent discussion, quoted in *Public Opinion*, says:

"The battle about heredity, and whether or not characters acquired by the parents can be transmitted to the offspring, proceeds merrily. Scientists are divided over this question. On the one hand, the disciples of Dr. Weismann deny the possibility of such transmission; while their opponents regard the handing on of parental acquired characters as not only a possible but a natural process of the vital economy. Dr. Alfred Russel Wallace, co-worker with Darwin himself, has lately placed on record a very valuable and singularly interesting suggestion regarding the influence on children's character of the parental mind. His contribution (published in *Nature*) tends to show that in the sphere of mental influence of parents on their offspring's character, at least, he is open to admit the validity of the "other side" of the hereditary question. If there is any reality at all in the instances Dr. Wallace records—he says rightly: "They seem to afford grounds for further investigation"—then the influence of the parents in regard to the transmission of ordinary acqui racters cannot surely be put out of court, as some biologists would maintain, as "entirely unsupported by any trustworthy facts."

Dr. Wallace's recital begins with the mention of an instance quoted by George or Andrew Combe in which the character of a child appeared to have been affected by the prenatal studies of the mother. This item becomes interesting in view of the fact that, after a persual of Dr.

Wallace's articles on the question of the inheritance of acquired characters, an Australian lady wrote him on the subject of the parental mind on the unborn offspring. Some of the details given by this correspondent with reference to her own experiences, and to those of another lady, will be read with deep interest by every intelligent person interested in the problems of heredity, and in what may fitly be called the romance of science. The first cases are those of the correspondent's own children. Her first child, a girl, is now twenty-two years of age. She exhibits a special aptitude for sewing, planing and cutting out. Before her birth the mother, passing to reside in a new country, had to plan and sew for herself. The girl has also a strong aptitude for history, which the mother traces to her own study of Froude. The girl's other tastes for art and literature are "distinctly hereditary." A second child, also a daughter, has marked literary tastes, and at six years of age, used to read and enjoy Tennyson's ballads. She is a B. A. of the Sydney University, taking her degree when barely twenty. Before her birth, the mother had interesed herself in literary pursuits. The third child was a boy. Prior to his birth, the current of the family life had changed. The mother had no time for literary studies, or other "studious pursuits," and her occupations were more mechanical in character than at any previous time. The boy "does not inherit the studious tastes of his sisters at all." He is intelligent and persevering, but prefers outdoor work or handicraft to study.

This most intelligent mother next passes to the experience of her friend in support of the idea that parental influences may be thus clearly and directly handed on to the children. This friend, before the birth of her eldest girl, took to the study and practice of ornithology, and did a good deal of bird-stuffing as well. At the age of three years the girl shows an intense desire to study insects and other animals, and later on, takes to dissecting them. This predilection for natural history studies still remains with the girl. The next child, a boy, exhibits a marked liking for medical and surgical studies, and often expresses the wish that he had been "made a surgeon." Prior to his birth, the mother, strangely enough, had nursed a friend suffering from an accident for three months. On the theory of prenatal influences, the nursing and surgical duties of the mother are accountable for the lad's strong bias toward medical studies. The third child, a girl, exhibits artistic tastes of unmistakable nature. She draws well and excels in artistic talent of many kinds." The mother's life, prior to her birth, is described as having been idyllic in character; her parents then "did nothing but fish, catch butterflies and paint them. At least," adds the mother, "my husband painted them after I had caught them, and mixed his colors." There there may be direct heredity here, of course. The fourth child is a "most prudent, economical girl, a splendid housekeeper, and a good cook, and will work till she drops, but has no taste for reading, but seems to gain knowledge by suction." Before the birth of this child, the mother had experienced many trials. Her husband fell ill of fever, and she had to nurse him without help of any kind. The family also sustained losses by floods. "I don't know how I got through that year," adds the mother, but I had no time for reading."

It may be said, and probably will be said, that the mothers are "only wise after the event" when all is said and done. But there is such a singular correspondence of the exact kind between the characters of the respective children and the occupations which engaged the mothers' attention prior to their birth, that it is impossible to dispose of the cases thus related on the convenient supposition that the facts have been dovetailed into their places and made to fit the mothers' theory. Dr. Wallace remarks that materials must exist in family records and experiences for determining whether there is anything in the idea thus promulgated of parental influence on character."

TRANSLATIONS.

CONTRIBUTIONS TO THE STATISTICS OF MAMMARY CARCINOMA.*

The author, Dr. G. Dietrich, has collected from literature 110 cases, and gives a short history of each. Especially considered are 52 cases which occurred between the years 1872 to 1880, in Luck's clinic at Strasburg. Earlier statistics (Winiwater, Henry, etc.) show the disease to occur most frequently between the ages of forty-six to fifty years; the oldest patient was seventy-three, the youngest, thirty-four. 107 cases occurred in women, 3 in men (of these, one died of erysipelas; a second, two and a-half years after the operation, of inflammation of the lungs, and the third, after several months, from a return).

The history following the operation was unknown in 18; 10 died in the hospital.

75 women were married, 17 were widows and 14 were single. About nineteen per cent. had given birth to more than six children; and among 68, there were nineteen per cent. who had nursed more than six children; 12 patients had suffered from mastitis. The shortest time between mastitis and the development of carcinoma was (in 2 patients) three months; the longest period was thirty-eight years.

Trauma was ostensibly the cause in 10 cases; heredity in 6. The right breast was affected in 53, the left in 48 and both breasts in 2 cases.

Pathologically, the scirrhus variety was more often present; less often, the tubular or alveolar forms. Among 95 cases there were 4 in which the skin, or axillary glands seemed to be involved. The axillary glands were involved alone thirteen times; skin seventy-eight times, of which in 20 the process confined itself to skin only, while 58 were complicated with enlarged axillary glands.

Ulceration of the growth occurred eighteen times, adhesions to the pectoralis major twelve times, the first of this series having the cancerous cachexia, leading to the suspicion of internal metastases.

Most of the patients were in good condition for operation, which took place in the majority of cases about seventeen months after the disease had been noticed.

Five patients could not be operated on owing to metastasis, two were operated on although all axillary glands could not be entirely removed and both remained without any return of the disease, respectively eight and five and a half years.

In two cases the axillary vein was doubly ligated and excised. In one case a partial excision of the axillary vein and nerve, also the middle portion of the plexus brachialis became necessary and aside from a transient œdema there was no change of mobility or sensibility.

During the years 1872 to 1880, there were 44 cases with 9 deaths, while in 1880 to 1890, there were 104 cases with a mortality of 8 (7.6 per cent). Three died with erysipelas; 1 from croupus pneumonia and embolism of the lung; 4 from metastasis, *i. e.*; general carcinoma. During the last 9 years there has been no case in which erysipelas formed a complication.

In order to get a more accurate account of the 80 living out of the 95, the author took particular pains to communicate with the patients. He found at the end of September 1891, 28.7 per cent. or 23 living. In 11 the cure lasted 3 years without a return; 2 died 5 years after the operation, not of return but from an intercurrent disease. So that on the whole 13, or 16.2 per cent. might be considered definitely cured. Return of the disease was noticed in 45. Of these 13 were treated by operation, 28 in the first and 9 in the second half-year after the operation. Late returns (that is 3 or 4 years) were only noticed in 3 cases. (*Deutsch Zeitschr f. chir*).

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* Translated for THE MEDICAL AND SURGICAL REPORTER by Marie B. Werner, M. D.

ABSTRACTS.

PARALYSIS OF THE ARM FOLLOWING THE APPLICATION OF AN ESMARCH'S BANDAGE.

Dr. James Bell related, at a recen meeting of the Montreal Medico-Chirurgical Society, the history of the case, the circumstances being, in his experience, unique. A young woman, twenty years old, admitted to the hospital January 16th, with ankylosed elbow joint. The position was not a very bad one, being a little greater than a right angle. The history of the injury was as follows: On the 6th of last July she fell in a car, and, knocking against the wall, hurt her elbow. At the time she did not pay much attention to it; but after awhile, the joint having become stiff, it was thought necessary to call on a doctor. The latter attempted passive motion, which was partially successful, but the ultimate result was ankylosis in the above position. Excision of the joint was advised, to which she after awhile consented, and the operation was carried out in the ordinary way. It was noticed, after removal from the operating room, that she had no power in any of the fingers, and that even sensation was not normal. Owing to the hand being encased in dressing, no very accurate observation could be made for some days, but it was remarked that the fingers perspired profusely. At the end of the third day after operation, being anxious and unable to explain the paralysis (the operation was done sub-periostal, and he was sure no injury had been done the ulnar nerve, besides injury to the latter would not account for paralysis of all the fingers and muscles of the forearm), the dressing was removed, and the explanation was at once patent. The Esmarch had been applied in the upper portion of the arm, just above the belly of the biceps, and below the prominence of the deltoid, and it had been tied so tightly that the skin was blistered. There was consequently no longer any doubt as to the Esmarch being the cause. The whole operation only occupied forty minutes, so that the band altogether could not have been applied more than half an hour. Upon the discovery of the neuritis she was at once put under the care of Dr. Stewart. Motor paralysis remained absolute for three weeks. On the 21st, day the first sign of movement returned, being a slight motion of the thumb; and after about six weeks' treatment she returned to her home with almost complete power of the arm. Once movement began to appear, it progressed very rapidly. She was able to flex and extend the arm and fingers completely, though not with the full amount of power. There, however, was no motion deficient.

This case is very instructive and very important, in view of the frequency of the application of the Esmarch. It is interesting on account of its rarity. It was the first time he had met with the accident, and considering the number of operations he had seen in the last twenty years, and the recklessness with which the Esmarch had been applied in all sorts and conditions of patients, it seemed to him that this must indeed be a rare complication. It could hardly have occured had the Esmarch been applied in any other part of the body; but it is a lesson well worth bearing in mind.—***Montreal Med. Journal.***

Common Mistakes of Doctors.

1. To promise a patient that you will cure him.
2. To promise to call at an exact specified time.
3. To promise that the malady will not return.

THE LIBRARY TABLE.

BOOK REVIEWS.

A Text-book of the Theory and Practice of Medicine. By American Teachers. Edited by William Pepper, M. D. LL. D., Provost and Professor of the Theory and Practice of Medicine in the University of Pennsylvania. In Two Volumes. Illustrated. Volume I. Phila: W. B. Saunders. 1893. [Sold by subscription only. Price per Volume, $5.00]

Among the many books that have been recently written on the Theory and Practice of Medicine we know of none that is likely to meet with as much favor as this one that has been just offered.

Most of us realize that the day has passed when it is possible for any one man, no matter how eminent he may be, to offer to the medical world a work that will either meet the demands of the every day practitioner or equal the collected study, experience and labor of the many who are themselves recognized as specialists in their particular field of work. Such an array of talent has never been associated in an effort of this kind before in America.

That each of these forty-five articles are signed gives much satisfaction.

The care that has been taken in presenting the very latest methods of differential diagnosis of all diseases will be found of the greatest assistance to the general practitioner, as it will not be found necessary to consult any works more especially devoted to the subject.

The chapter on Hygiene by Billings, which includes a full discussion of disinfection, isolation and other principles of preventive medicine, together with the master-piece of Wood on Mental Diseases are deserving of special mention.

The following list of articles completes this volume.

Ephemeral Fever and Simple Continued Fever, Typhoid Fever, Typhus Fever, Relapsing Fever, Cerebro-spinal Fever, Influenza, Dengue, Miliary Fever, Milk Sickness, Mountain Fever; Septicæmia and Pyæmia and Leprosy, by *William Pepper*, M. D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine, University of Pennsylvania. Scarlatina, Measles, Rubiola, Small-pox, Vaccination, Varicella, Mumps, Whooping Cough, Tetanus, Actinomycosis, Anthrax, Hydrophobia, Trichinosis, Glanders, Foot-and-Mouth Disease, by *James T. Whittaker*, M. D., Professor of the Theory and Practice of Medicine, Medical College of Ohio, Cincinnatti. Acute Miliary Tuberculosis, Scrofula, Syphilis, Diphtheria, Erysipelas, Malarial Fevers, Cholera, Yellow Fever, by *W. Gilman Thompon*, M. D. Professor of Physiology in the Medical Department of the University of the City of New York. General Symptomatology of Diseases of the Nervous System, Mental Diseases, Functional Nervous Diseases, Syphilis of the Nervous System, Organic Diseases of the Spinal Cord and its Membranes, by *Horatio C. Wood*, M. D., Clinical Professor of Nervous Diseases, University of Pennsylvania. Organic Diseases of the Brain, Diseases of the Nerves, Diseases of the Muscles, Vaso-Motor and Trophic Disorders, by *William Osler*, M. D., Professor of Practice of Medicine, John Hopkins University, Baltimore, Md.

The Health Resorts of Europe. By Thomas Linn, M. D. London: Henry Kingston, 82 High Holbone W. C.

This is a hand-book of 300 pages, written by a distinguished American graduate in medicine, who is also doctor of medicine of the faculty of Paris. Dr. Linn has had a large experience in the health resorts of Europe, their mineral springs, of the climatic changes of these regions, he having been the physician of the famous bathing establishment at "Aix Les Bains and Marlioz" for a number of years.

The book is very much superior to the usual guide books, as these are written by non-professional people, and while they give correct information, they contain errors that make them useless from a medical point of view. All the resorts are written up in this work, while special attention is paid to the sanitation of each station, and its general hygiene.

We feel sure the book will be found useful both to the public, and to our professional brethren, who may not have had opportunity of making personal observations of these European resorts.

Dr. Linn quotes an interesting table lately drawn up, showing the cost of living in different countries. According to the same, it would appear that outside the expensive quarters in London, England is the most reasonable, next comes Switzerland, 4 per cent dearer; then Germany, 10 per cent. higher; then France, 15 per cent.; Italy, 20; and the United States (as represented by Pennsylvania); 24 per cent. higher than England.

The preface to the volume is from the pen of A. C. Samson, M. D., F. R. C. P., of London, England, a well known physician of that city, who very properly emphasizes the importance of invalids consulting their own medical adviser before going abroad in search of health. With the aid of this useful volume physicians can post themselves, and be able to give the proper advice to their patients.

Clinical Lectures or Abdominal Hernia. Wm. H. Bennett, F. R. C. S. London and New York: Longmans, Green & Co.

Review of Dr. Wm. H. Bennett's lectures on hernia are well worthy of the consideration of the medical profession. They cover the ground in a most thorough manner and indicate a thorough investigation of the subject by a surgeon who has derived his experience through service at the operating table. This work should be in the hands of the entire medical profession. Any one who is doing special work in abdominal surgery should read it and appropriate its many good points.

Cosmopolitan for November.

A magazine is usually satisfied with one strong feature for the month. *The Cosmopolitan*, however, presents for November no less than five very unusual ones. William Dean Howells gives the first of the letters of the traveller, who has been visiting this country, from Altruria. We have read Mr. Howells' impressions of the Altrurian; but in this first letter we have the Altrurians' impressions of New York, with some comments upon the government and society, calculated to awaken the most conservative minds. The second feature of *The Cosmopolitan* is the portion of the magazine given up to color work, no less than ten superb color illustrations being presented for the first time in magazine history, accompanying an article by Mrs. Roger A. Pryor on "Changes in Women's Costumes." The third feature is "American Notes," by Walter Besant, who was recently in America and is doing the United States for *The Cosmopolitan a la* Dickens. The fourth feature is by General Badeau on "The Forms of Invitation Used by the English Nobility." The article is illustrated by the fac simile of cards to the Queen's drawing-room, to dinner at the Princess of Wales, and to many leading houses of England. Finally, we have a new and very curious story by Mark Twain, called "The Esquimau Maiden's Romance." It is in his happiest vein and is illustrated by Dan Beard. The November number presents the work of many artists, among whom are: C. S. Reinhart, Otto Guillonnet, J. H. Harper, G. Hudson, Frank von Lenbach, George Wharton Edwards, F. Schuyler Matthews, Dan Beard, W. L. Sontag, Jr., F. G. Atwood, C. Hirschberg, J. Habert-Dys, August Franzen, Louis J. Read, J. N. Hutchins and Hamilton Gibson.

System of Diseases of the Ear Nose and Throat. Edited by Charles H. Burnett, A. M. M. D. In Two Volumes. Vol. 1, 8vo., pp 789. Illustrated Philadelphia: J. B. Lippincott Co. 1893. Price, Cloth, $6.00; Full Sheep, $7.00; Half Russia $7.50.

We are very glad to welcome this system of Diseases of the Ear, Nose, and Throat.

The entire system is comprised in two volumes, the first volume being devoted to the ear, the nose, and the naso-pharynx, while the second volume is occupied with the consideration of the diseases of the pharynx and of the larynx.

Men of acknowledged skill as specialists in this field of work, both in America and Europe, have labored together to complete this work.

The opening chapter on Anatomy and Physiology of the Ear and tests of Hearing by William Satier Bryant, A. M., M. D., is an exhaustive article and well worthy of a careful study; for on a correct knowledge of the structure very often depends the basis of sound, careful and well directed treatment.

The chapter on chronic Purulent Otitis Media by Charles H. Burnett says "Every endeavor should be made to check a chronic purulent discharge from the ear. There should be no fear to do this as promptly as possible, for so long as a chronic purulent discharge comes from an ear, the patient's life and hearing are in danger;" again he says, "that whenever an acute purulent ostitis media is properly treated it never becomes chronic"; again "no case of acute purulent inflammation will become chronic, *no matter what its cause*, if properly treated at the outset."

Possibly mention should be made in passing, of the articles on Foreign Bodies and Osseous growths in the External Auditory Canal, including neoplastic closure by Sir William Bartlett Dalby; Acute Rhinitis by Dr. F. H. Bosworth, and Diseases of the Accessory Sinuses of the Nose by Dr. Joseph Bryan.

The book contains an unusual number of illustrations, some of them colored. The publishers are deserving of much credit for the quality of the paper and the good press work exhibited.

Diseases of the Rectum and Anus: Their Pathology, Diagnosis and Treatment. By Charles B. Kelsey, A. M., M. D. Fourth Edition, revised and enlarged: With two chromo-lithographs and one hundred and sixty-two illustrations. Published by William Wood & Co., New York.

That this well known text-book has reached its fourth edition certainly demonstrates its value and the appreciation in which it is held by the student and practitioner.

Before allowing this edition to come before the profession, there has been incorporated in it and whatever of value has been added to our fund of knowledge by the labors of others in the same line of work. Dr. Kelsey certainly deserves much praise for the creditable and masterly manner in which he has performed his task.

The book contains eighteen chapters. The chapter on "Fistula" is well worth the cost of the work. "Hemorrhoids" is another good chapter, fifty-three pages are devoted to their consideration. Prolapse and invagination are studied as four distinct varieties. 1. Prolapse of the mucous membrane alone. 2. Prolapse of all the coats of the rectum, including, when the disease is of sufficient extent, the peritoneum. 3. Prolapse of the upper part of the rectum into the lower, or invagination. 4. Invagination in the continuity of the intestine.

Under the head of non-malignant growths of the rectum and anus are included polypus, vegetations, condylomata, benign fungus, fibromata, lipomata, enchondromata, and the various forms of cysts. The many different varieties of non-malignant ulcers which are met with at the anus and within the rectum, are classified from the standpoint of etiology, into the following groups: 1. Traumatic. 2. Catarrhal. 3. Tubercular. 4. Scrofulous. 5. Dysenteric. 6. Venereal.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE NEW YORK JOURNAL OF GYNECOLOGY AND OBSTETRICS

for October.

Dr. John N. Upshur contributes an article on

Reflex Bladder Troubles.

The author considers the most common cause of vesical troubles to be some lesion of the uterus, affecting the bladder through reflex sympathy, although he fully recognizes other agents, such as urethral caruncle, seat worms, etc. Sometimes great vesical distress will be found in very young girls even at the age of three or four years, due to acid urine, caused by eating too many sweets. This form of trouble is not always confined to children, as a too acid urine, or one containing an excess of solid constituents, especially the latter, may give rise to vesical distress, most intense in character and attended by pain in the back and down the thighs, weight in the lower part of the abdomen, with frequent calls to empty the bladder, and may even give rise to a suspicion of uterine disease. The existence of fissure or hemorrhoids may sometimes cause great vesical distress, but as soon as these affections are discovered as the cause, the indication for relief is very plain. Pressure from the gravid womb in the latter stages of pregnancy when many children have been borne, is a common cause of vesical distress. Another class of cases is found in which both centric and excentric influences are at work, as for example, the woman who for some reason retains her water too long after the call to void it, causing over-distention of the bladder, which in time causes retro-misplacement of the womb, and results in permanent debility of the sphincter and detrusor muscles of the bladder, with inability to retain urine for a long time. The calls to empty the bladder are frequent, unsatisfactory and incomplete, the residual urine becomes ammoniacal and acts as a local irritant; secondarily there comes a reflex influence from the misplaced womb, first because it is dragging on the bladder, and secondly because, being misplaced, all of the ills due to malposition are liable to occur, and many do coincidently exist, and thus the reflected influence from a diseased womb adds to the trouble of a debilitated bladder.

In regard to the treatment, the author advocates the use of some one of the alkaline diuretics in case the urine be found to be too acid. He strongly condemns the use of harsh injections into the bladder, especially when used empyrically, and particularly when the agent is nitrate of silver. The treatment is too painful and is liable to aggravate the trouble. The cause of the trouble must be located. The author has found that when gastric derangement was the cause, resulting in an acid, offensive urine, with pain in voiding, the benzoate of ammonia, gr. xv, every two, four or six hours, will sometimes afford very prompt relief or resort may be had to some other agent which will so modify the gastric condition as to produce a bland and sterile urine. When all else fails, resort may be had to drainage either by a self-retaining catheter, if its presence in the bladder can be borne, or by paralyzing temporarily the vesical neck by such extreme stretching as to permit constant dribbling, the person being for the time protected by wearing a nicely adjusted urinal; or by an artificial vesico-vaginal fistula.

The other papers in this month's issue are: "Congenital Dilatation of the Urethra," by W. H. Baker; and "The nature of Shock," by Dr. Eugene Boise. [As this paper is practically the same as one published by the author in The Annals of Gynecology and Pædiatry for October, it will be reviewed in connection with that journal.—ED.]

THE ANNALS OF GYNECOLOGY AND PÆDIATRY

for October.

Dr. Eugene Boise contributes an article on

The After-treatment of Cœliotomy Cases with Special Reference to Shock and Septic Peritonitis.

The three post-operative conditions, which, by reason of their serious nature, call for prompt and intelligent action on the part of the surgeon are secondary hemorrhage, shock and septic peritonitis. In regard to secondary hemorrhage, the treatment should be mainly preventive, and consists of careful, certain securing of all possible sources of hemorrhage at the time of operation. But, as an additional preventive measure, and one whose importance is sometimes under-estimated, continuous watchful care must be exercised to prevent sudden movements on the part of the patient, or turning or tossing during the first few hours following the operation. If hemorrhage does occur, the only remedy is to re-open the wound and re-tie the bleeding artery. If the patient's condition will not allow of this, the author suggests to secure the vessel by clamps, close the wound as securely as circumstances will admit and wait for reaction. The author suggests that the transfusion of one or two pints of normal salt solution before opening the wound will greatly improve the patient's chances of recovery in desperate cases.

Shock he regards as a severe irritation of the entire sympathetic system and in no sense a paresis. Such, at least, is the condition primarily though he admits that after a variable period the entire condition may change without any perceptible change in the symptoms. All muscular tissue tires after a period of unusual activity. This is equally true of involuntary as of voluntary muscles. And although the nerve impulse continues irritant in nature, the heart muscle is weakened, and cannot contract with normal vigor. The arterial spasm is at the same time violent. The frequency of the heart beat may continue the same, but the size of the blood current will not be increased.

The conditions which exist during and after a cœliotomy, which is productive of shock, certainly would seem to be such as would give rise to an impulse of irritation rather than of paresis, for instance—the compression of the nerve fibres by the ligature, the severe manipulation of the intestines, the forcible separation of adhesions, whereby the peritoneum always suffers more or less violence—all are extremely irritant in nature.

In regard to the treatment of shock; when first seen, the patient's head should be lowered, and nitrite of amyl freely administered, with possibly hypodermics of nitroglycerine. The surface of the body should be kept as dry as possible. to prevent unnecessary chilling by evaporation. As the author considers the condition to be one of extreme irritation, he advises directly sedative remedies and especially cœdeine, of which he administers at least one grain hypodermically as soon as the patient is placed in bed, and repeats the injection in one two or three hours if necessary. He answer the objections that have been raised against the use of opium by saying that there are no symptoms to be masked by its use thus early and that so far from the checking of the secretions and the stopping of the peristaltic movements of the intestines being deleterious he ragards it as just the reverse, since in shock the prespiration is excessive and the peristaltic movements painful and irregular. Hot water used freely by injection into the colon or transfusion into a vein, he considers a remedy of great importance in the treatment of shock. The indications for its use are to allay the great thirst which follows an abdominal section and to refill the blood vessels. If the shock extends into the second period, where cardiac and arterial spasm are replaced by cardiac weakness, by reason of "muscle tire," he advises the free hypodermic use of strychnia, digitatis and other cardiac stimulants.

In the post-operative treatment of threatening sepsis (or peritonitis) he advises free catharsis by means of the magnesia salts or calomel, if the stomach will not tolerate the magnesia. In ordinary cases where there has not been much irritation of the abdominal or pelvic contents, there will be no difficulty in producing catharsis after thirty-six or forty eight-hours. But in those cases where the dissection of tumors etc., has been difficult and prolonged, where there has been severe manipulation of the intestine, with perhaps direct and intense irritation of ganglia and plexuses, there is generally a more or less severe irritation of the intestines. This manifests itself by paroxysmal pains, often extremely severe, which are caused by spasmodic and irregular peristalsis. Here there is always over-stimulation of the motor nerves of the intestines and fuel is only added to the fire by the exhibition of stimulating cathartics. The indication is to severely abstain from everything that tends to stimulate peristalsis until, by the subsidence of the pain or the escape of the flatus, we can perceive that normal peristalsis is re-established, and the conditions are favorable for gentle unirritating catharsis. If the abnormal activity of the intestines be severe or prolonged, the author advises the early administration of a free dose of codeine; which relieves the pain, quiets the patient and relaxes intestinal spasm, and allows the re-establishment of normal painless peristalsis.

The effusion of liquid into the peritoneal cavity also hinders catharsis by depleting the intestinal blood-vessels. Much will be gained, the author thinks, by waiting till this flow is checked and the blood vessels have been given time to replenish themselves from the fluids in the tissues. It will be of benefit to precede the administration of salines by a rectal iujection through the long tube of at least a pint of hot water, which will be rapidly absorbed by the vessels. Then the introduction of a concentrated solution of sulphate of magnesia will easily establish the flow of fluid toward the intestinal canal and promote the rapid absorption of the fluid present is the peritoneal cavity. Thus good intestinal drainage is established.

If septic peritonitis is fairly established the forlorn hope is to re-open the cavity, thoroughly flush and a establish free complete drainage, both through the wound and the intestinal canal. Intestinal drainage may be difficult of production from the over—distension of the muscular coat by imprisoned gases, To remedy this and thus allow the muscular fibres to regain tone, a free incision into the intestine with perhaps establishment of a temporary artificial anus, will be good surgery.

Dr. Andrew F. Currier in an article on the

Intra-uterine Tampon

gives the indications for its use and the materials of which it should be made. His preference is for antiseptic gauze, inserted in strips an inch wide and eighteen inches long. He advocates the use of the tampon for the induction of labor, in a prolonged first stage of labor due to rigidity of the cervix and in post-partum floodings. In the unimpregnated uterus he advocates its use after curettage, to check hemorrhage and for the relief of the painful and profuse menstruation in young girls. Its use is also advised in endometritis and in place of stems in the treatment of stenosis. He considers it applicable in a limited extent in cases of tubal disease in order to drain ofl the accumulated fluid. In regard to the contra-indications for its use he says "The tampon may be so modified in as to quantity, firmness and duration of retention that I am unable to conceive of the impropriety of its use in any case in which intra-uterine treatment is admissible."

Dr. A. H. McFarland discusses the

Relations of Operative Gynecology to Insanity.

His conclusions are as follows:

(1) Gynecological operations are more likely than any other surgical procedures to disturb the mind.

(2) Hereditary antecedents of the patients should always be determined.

(3) In insane patients operations should be performed only when the physical condition endangers or renders life insupportable,

(4) Patients, precedent to the operation, should be in a calm frame of mind—hence, moral treatment of the patient previous to operating is the best prophylaxis.

(5) Inherited and acquired insane constitution is the fundamental factor in most cases of insanity. This conclusion does not, however, justify us in ignoring physical diseases immediately preceding or associated with insanity.

(6) Healthy genital organs do not give rise to reflex symptoms, consequently caution should be exercised in operating for the relief of insanity.

(7) Operations may be satisfactory in properly selected cases.

Dr. Joseph Tabor Johnson considers the subject of

Ectopic Pregnancy in the Later Months.

The chief object of the paper is to recommend the removal of an extra-uterine fœtus in all cases as soon as the diagnosis is made, and the gestation sac or placenta whenever possible, whether it be the second, fourth, seventh or ninth month. If the child can be saved, victory is still greater. The dangers of hemorrhage increase with the development of the placenta and in some cases the author believes it may be wise to leave the placenta undisturbed, with its tied cord protruding from the lower end of the wound, and subsequently remove it after its circulation has dried up; or if no sepsis occurs, it may be left to come away piecemeal, or become encysted and absorbed.

The author reports two cases operated on after the death of the fœtus, with one maternal death.

Dr. A. Vanderveer discusses the subject of

Drainage of Ovarian Cysts Where the Adhesions are Such that it is Impossible to Remove the Sac by Cœliotomy.

The author reports seven cases where the proceeding was resorted to. In carrying out drainage in these cases the patient should be put in the care only of a conscientious, judicious nurse. A glass draingae tube should be employed and made to reach to the deeper portion of the cyst, and whatever remains of the cyst walls and adhesions. A rubber drainage tube cannot be relied upon at first. Gauze packing is preferable to the latter.

The author advocates the procedure only in those cases in which it is impossible to make a complete operation, and in such desperate cases where the patient is likely to be carried beyond the point of possible recovery, and to die by shock, because of the too severe tax made upon the weakened vitality of the system.

Dr. J. M. Keating contributes a paper on the "Mechanical Action of the Intestines on the Uterus." The author believes that many of the displacements found in the growing uterus are due to the intestinal dyspepsias of the child, which are the result of improper diet. The article is illustrated by two halftone plates from photographs.

Dr. Augustus P. Clark contributes an article "On the Value of Certain Methods of Surgical Treatment for Chronic Procidentia Uteri." The various operations for the relief of this condition are carefully considered and the author advocates vaginal hysterectomy in cases of intractable prolapse.

Dr. Charles W. Rook discusses "Contraction of the Cervix Uteri Upon the Neck of the Fœtus, a Source of Danger to the Latter, and a Frequent Cause of the Prolongation of the Second stage of Labor." The author reports four cases of the accident. (In two of the cases reported, ergot had been given and it seems possible that the accident could be attributed to the use of the drug previous to delivery.—Ed).

Dr. H. McHatton contributes a paper entitled "Four Women who Refused Oophorectomy, and their Subsequent Histories." The patients are all living in the best of health in spite of the fact that each was advised to undergo an operation by well-known specialists. The author condemns indiscriminate operating.

In the Department of Pædiatry, Dr. William P. Munn contributes an article entitled

Diphtheria Associated with Scarlatina; A Clinical Study.

The points that he considers proven by an analysis of cases are:

(1) The membranous sore throat which so frequently occurs associated with scarlatina is true diphtheria.

(2) Association with scarlatina increases the fatality of diphtheria.

(3) Laryngeal and nasal involvement are more frequent with the associated diseases than with uncomplicated diphtheria.

(4) Paralysis does occur as a sequel.

(5) Both scarlatina and so-called scarlatinal diphththeria may communicate diphtheria without any scarlatinal accompaniment, both to those who have had, and to those who have not had, scarlatina previously.

The remaining papers in this issue are: "Intra-uterine Asphyxia, with Report of Three Cases," by Dr. George F. Hulbert; and the report of a "Fibroid Tumor Complicating Delivery," by Dr. T. J. Crofford. A review of this paper has already appeared in the issue of THE MEDICAL AND SURGICAL REPORTER for October 14th, 1893, page 616.

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

MEDICINE

Influence of Horziontal and Vertical Positions on the Cerebral Functions.

Sicard de Plauzoles (*Ann. de Pysch.*, 1893) lays stress on the function of the blood in maintaining the activity of the brain. A continuous circulation of the blood is a necessary condition, he says, for the regular action of the cerebral cells. Suspend momentarily the circulation in the encephalon and the phenomena of nervous activity are interrupted. The circulation of the blood is affected by the different positions of the body, the horizontal position accelerating and the upright inhibiting it. The carotid and vertebral arteries at the base of the brain anastomose in the hexagon of Willis, and in an erect position this latter rests on them, pressing them down upon the base of the skull, thus diminishing the flow of blood over the cortex. The brain-mass, being smaller than its bony covering, is capable of slight changes of position, according to the posture of the individual. Where stretched out horizontally, the cerebral substance loses its contact with the frontal wall, and in standing the upper portion rests on the lower part of the brain.

When, after lying down for some time, one suddenly rises, the brain passes from a congested to a relatively anæmic state and vertigo results. The modifications of the brain circulation, which cause vertigo, can be produced in two opposite ways—by congestion and anæmia.

Delirium may be due to these opposed conditions, and, indeed, all phenomena of cerebral origin—as convulsions, insomnia, etc.—may be caused by two contrary circulatory conditions.

Congested vertigo increases in a declined position of the head; anæmical vertigo in the erect position. Further, vertigo is often caused by sudden changes of attitude.

Normally, man passes a certain number of hours in the vertical position and in the horizontal position, and in the case of a healthy man it is difficult to perceive any very appreciable modifications of the play of thought following these changes of the cerebral position; but, in the case of persons mentally diseased, S. has found marked modifications, corresponding to these two periods.

One patient suffered for several weeks with insomnia. Before rising he was delirious, had continued feelings of faintness, and thought he was about to die, the violence of his sensations being lightened relatively to the amount of sleep he had obtained during the night. The temple pulse was more violent than when erect, the two not acting simultaueously, and the left more feeble than the right. During the day the patient improved, but in the afternoon, on extending himself in a hammock, the delirious symptoms returned.

Other cases are also cited. He sums up his statements thus:

Mental disturbance is greatest (1.) after a long horizontal condition—in the morning for example; (2) after a long vertical condition, in the evening, the intermediate hours being the least disturbed.—*Jour. of Nerv. and Ment. Dis.*

THERAPEUTICS.

Esencia De Calisaya.

Since this preparation was first put upon the market by it has grown rapidly in favor as a tonic, stomachic, and to a lesser extent as an antiperiodic. There are few cases in the convalescent stage to which it is not applicable, especially if anorexia, weakness, and physical and mental depression are to be overcome.

It is a well-known fact, moreover, that the combined alkaloids of the cinchona bark are much more effective as a tonic than any one of the same taken singly. They are to be preferred in many instances as an antiperiodic particularly where the periodicity of the attack has been in some degree mitigated. It is for this reason that the East India Government now provides its officials with what is termed "Cinchona Febrifuge"—which is but a combination of cinchona alkaloids—in preference to quinine. While cases are encountered where quinine seems practically indispensable, there are few that will not yield, and more satisfactory, to a combination of cinchona alkaloids if persisted in.—Esencia de Calisaya and Cinchona Febrifuge are practically identical, save that the former is a fluid medicament, the latter a powder.

Esencia de Calisaya has been employed and highly recommended as a tonic in neurasthenia and other forms of disease that are the result of, or connected with, general physical and mental depression. *Apropos* of this, Dr. Wyatt Wingrave, Surgeon at the London Throat and Ear Hospital remarks:

"I have great pleasure in expressing my appreciation of Esencia de Calisaya. It is an ideal 'Pick-me-up' and general tonic. It is slightly stimulant to the gastric mucous membrane, and is particularly useful in atonic dyspepsia. *In the alcohol habit, it satisfactorily neutralizes the craving for spirils*, and will be found of great service in treating this distressing disease."

THE

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ORIGINAL ARTICLES.

THE GREAT VALUE OF A CLOSE OBSERVATION OF OTHER MEN'S WORK.*

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It is much to be regretted that most of our American surgeons are content to play a game of surgical solitaire. Absorbed in the magnitude of their own work, and busied with the perplexities of daily experience they forget the existence of others laboring in the same field and too frequently ignore the work of both friends and rivals.

True, the meetings of societies are attended. At these meetings papers are read and the various questions are discussed alike with intelligence and enthusiasm. All this may strengthen and brighten the intellectual powers generally; may freshen the memory, increase the vocabulary and help to outline and identify accepted and well settled doctrines; indicate, enlarge, modify, or limit the proper field for surgical effort and investigation. While this may serve to keep up the enthusiasm without which no great science advances, it adds but little to the skill or success of each individual operator. No one perfects his technique, discards his methods, improves his materials, or succeeds in his results, merely by participating in the discussion of abstractions or listening to the reading of highly ornate reports which so often constitute the intellectual pabulum set before the fellows of our great medical associations at their stated annual meetings.

Each operator, be his experience great or small, has qualities both negative and positive. No one is perfect; neither is any one devoid of ideas that may be adopted or assimilated to advantage.

All successful operators have traits peculiar to themselves; attributes that stamp their work as original.

It is by the tireless energy of originality and the endless application of original methods to both the expected and the unexpected in surgery, that has thus far pushed our work and its underlying science toward perfection. It is these same elements that are to explore new fields and score new triumphs along paths long since pressed by the feet of genius, learning and skill.

To be trained in the routine of what has become already a common heritage, to only imitate or reproduce the achievements of the great names in surgical history is one of the possibilities that belongs to mediocrity.

As the stream of knowledge rises higher and higher, as the fountains grow fuller and fuller, mediocrity will be almost a universal fate: and, while the general professional level may be a very high one, yet a general level there will be and few, indeed, will be the upturned faces that float above the surface of the common sea.

As our science becomes more nearly a closed book less will be left for genius to accomplish. Unsolved problems becoming fewer and fewer, the great body of fixed knowledge will furnish a field great and broad enough to satisfy the most exalted intellect. The multiplied achievements of the past, will serve for both study and precedent. The infinitesimal accretions piled up by countless workers who have had their day will become the property of the few who may, at any one time, occupy the future stage of action.

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* Read at the 19th annual meeting of the Mississippi Valley Medical Association.

By close and frequent observation defects in technique and improper application of surgical measures may be noted, and, having been recognized these may be avoided.

The greatest commanders have blundered. The greatest poets have limped in their measures. Homer himself did sometimes nod. Even the divine Shakespeare could not sustain an even flight. Our greatest operators may be pardoned if not free from error; but their faults, when seen, should become doubly instructive to the observer, who should set them down on his chart that he may deny himself a like experience. All that is good in their work should be copied or carefully studied until originality working patiently and conscientiously can replace it with what is better.

Without just, intelligent, and searching criticism there can be neither advances into strange territory nor a correct appreciation of what has become already common property. Criticism, except of the carping and most superficial character, cannot exist without close, accurate, and abundant observation.

Unless we pause long enough to study carefully and thoroughly what has been given us to have and to hold, we shall be found ignorant of what lies beyond, or what difficulties have been made the easiest of problems.

By observation, honesty in reporting is encouraged. If one's work is to be carefully scanned by intelligent visitors, only statements will be put forth that are sustained by the every day results as seen at the operating table and the bedside. That man's statements alone are to be doubted who makes marvelous claims of success, who publishes great series of wonderful operations and at the same time closes the door upon visitors. But, because one operator on his own statement, breaks the record, no one who has not observed his work is justified in decrying statistics merely because they throw his own experience into the shade.

By observation men are inspired to do their best, and the daily practice of the nicest refinements of technique becomes automatic as constant repetition leads to ease of execution and grace of action.

In the observer, modest self-confidence is promoted, while egotism is rebuked if not abashed.

He who is absorbed in himself, and charmed into a state of self-sufficiency by his flatterers, needs very much to see what others are doing; for it is possible to become so much in love with self that further advance is out of the question till a professional looking-glass is broken and vision penetrate the field beyond. When an operator reaches the point that you can hear nothing but "my instrument," "my modification," "my method," it is a good time for him to look about and see what his friends are doing.

When the spirit of observation and comparison is abroad, experience throws open the door to the honest investigator, and the knowledge and skill that have accrued for the benefit of the suffering are carried away in ever widening circles, till every shore of surgical thought and every island of gynæcological theory are touched by a common ocean.

Equals may profit by watching work illuminated by the experience and skill of each other. No two men think, observe or act identically. No two parallel each other at all points. One is often the complement of the other. Where one is strength the other is weakness. By mutual observation inequalities may become less manifest, and the weak points of the one may be dropped for the strong ones of the other.

A closer and more frequent observation of the work of American surgeons by one-another would redound more to the honor of American surgery and lessen the colossal egotism of foreign operators who fancy that because we pour such hordes of Dr. students and observers into their clinics, we must have no teachers at home.

There is no field in which object lesson teaching is so effective, so fruitful of valuable practical results as in gynæcological surgery. The observer may not always know whether the operation he witnesses carries the patient on to recovery or the contrary; but, if a close observer, he is improving his own surgical judgement. He is studying, rejecting, or adopting methods and aphorisms as they impress his intelligence or his reason approves. He gives each a place in his memory according to its measure of value.

There must be approved technique, superior skill, aptness and deftness both mental and manual to secure the best results; and results furnish the only satisfactory logic in support of methods. That surgery is the most ideal which gives the highest per cent. of recoveries. It is of but little interest to the patient whether she is drained or not drained, so she gets well and with the least trouble or annoyance. So that hernia does not follow, all questions of closing are the merest tweedle-dum and tweedle-dee to her; these things are of vital importance to the observer who settles them and a thousand one other questions for himself and in the interest of those who trust in his conscience and his skill.

The quick, interested observer finds little or no difficulty in detecting the weak or strong points of a procedure and he gains much by contrasting the methods of different operators as he has witnessed their application.

A surgical triumph or a surgical disaster may be equally instructive in the light of a method by which the one is duplicated and the other avoided. In the presence of the most appaling surgical accident the resources of an operator may display themselves in a succession of victories that leave a most lasting impression upon those who are simply studying the work.

The intelligence too dense to be penetrated by the lessons set before his eyes at the operating tables of the great masters in the profession, ought to be presented with a cap and bells and assigned to a chair in some little one-horse poly-clinic in an obscure town where everything exists in great variety and marked abundance—except students and clinical material.

Because there is so little mutual observation the really brilliant and original man is often unappreciated and misunderstood. His very originality and success often expose him to the accusation of being a surgical heretic, a sacreligious iconoclast who hampers himself by no obsolete rules; but, who, like Napoleon, wins his battles on lines of his own choosing and according to principles evolved by his own genius and justified only by the inexorable logic of success.

These shafts of calumny, these mental brick-bats are hurled at the heads of these who rise above the dead level of mediocrity, by those who find it easier to imitate than to analyze and whose minds catch and hold mostly the rubbish of the past. To be maligned, abused and robbed of a just fame is one of the rewards that often befalls the benefactors of the human race and the masters in medicine are no exception to a rule that has embittered the lives of some of the greatest.

Mutual observation among those who teach both by their writings and their clinical work, would do away with provincialism and create a common feeling of respect and confidence. New York would not look askance at the radicalism of Philadelphia; Philadelphia would no longer turn up her nose at New York's poke-easy conservatism: Indianapolis would not then assert that Birmingham departs abruptly from the truth. Chicago, while her gynecologists and electricians were beating their swords into plowshares and their knives into pruning hooks and learning war no more, might be found a medical center equal to any, while much nearer to the student than Paris or Berlin.

Though the mutual observation of teachers and leaders of surgical work in our large medical centers would soften asperities, increase mutual respect and confidence, lessen back-biting, destroy envy and jealousy, diffuse correct methods and doctrines and everlastingly demolish that disgusting toadyism which loves to abase itself before foreign shrines—a consummation devoutly to be wished by all who have at heart the honor and glory of America and the triumph of American surgery—yet it is among the large body of country doctors, who must do all things and do them well, that observation is of the most vital importance. Having an experience that covers the entire range of medicine and surgery, they are of necessity less skillful in given lines than are the specialists.

The first thing that impresses a medical pilgrim from the country or from one of the small cities or towns is that the time has long since gone by, if it ever existed, when it was necessary to leave America for Europe to learn abdominal surgery or gynecology.

Statistics show that so far as results are concerned American surgery leads the world. Results are what we most eagerly seek; and that surgery which gives the greatest number of recoveries is the work for us to study and to duplicate. The surgery which goes on day after day doing some ideal operation while registering a mortality of thirty per cent. may be good surgery where dissecting material is scarce and the study of pathology amounts to enthusiasm; but we, in the country, must cure our patients, or Othello-like, our occupation will be gone.

Again, until we have seen the work of others or tried, in cases of emergency, to save life by a resort to surgery, there is a deep impression that great difficulty and danger wait at the elbow of him who does abdominal work. That there is greater difficulty or danger in abdominal and gynecological work than in any other complicated surgery is a proposition that does not hold good in the presence of close observation at the operating tables of the best men in both general and special work. While the technique is exact and will admit of fewer lapses than other work it is no more exacting than should obtain in any department of the surgeon's art.

By observation and contact the country doctor and general practitioner soon learns that the Professor's chair does not always hold either a great teacher, or a great operator, and that in the case of some who write our books the pen is mightier than the scalpel. This fact makes some observation a prime necessity to him who would essay the intricate and trying work that pertains to the higher and more important surgery.

The text-book written from the library of a bungler who holds down a chair in some powerful medical school is foisted upon the readers of the profession as a guide. The old store of cuts that have done service since the time of Astly Cooper or John Hunter are resurrected by wealthy publishers; and lurid advertisements, liberally paid for, induce the masses to buy. By just such means as this we are led to fill our libraries with a lot of trash which we find blind guides in emergencies and false teachers in the common every day practice that comes to us all. A very small amount of observation of these men in their work will soon teach us that books are often written as a personal advertisement and floated upon the market by the same means that put the authors into a surgical chair or gave them a hospital appointment.

Close observation will likewise show that medical colleges and medical professorships no longer dominate the profession as in days gone by. They are more in the nature of kindergardens where the infantile medical mind is shown the rounded globes of therapeutic systems, the perfect squares of surgical doctrine.

By observation one soon learns that as authorities teaching the newest and the best, teaching it ably and thoroughly, post-graduate schools now occupy the position that a few years back was held by medical colleges.

By seeing work done under varying conditions and with different results we readily come to the conclusion that a private hospital is by no means necessary to successful work. That the pure air of a country or village home or a clean room in a private residence in the city is as good a place for surgical work as the most painted and gilded hospital; and, that no one need hesitate because his patient can not have the supposed advantage of some place specially set apart for the sick.

But, while recognizing and appreciating the great value of observation we can not forget that in its absence there is always room for genius to surprise by its own creations; and we remember, with pride that the two greatest men in modern surgery, McDowell and Sims, were a product of the backwoods, and that their triumphs were worked out far from the maddening crowd.

Common Mistakes of Doctors.

1. To promise that you can render more efficient service than your fellow-practitioner.
2. To promise that your pills are not bitter or the knife will not hurt.
3. To promise that the chill or fever will not rise so high to-morrow.
4. To allow your patient to dictate methods of treatment or remedies.
5. To allow yourself to buoy up the patient when the case is hopeless.

CLINICAL LECTURES.

DIAGNOSIS IN ABDOMINAL TUMORS; PROLAPSUS UTERI.*

E. E. MONTGOMERY, M.D.†

Gentlemen: As this lecture is somewhat of an introductory one in the course, I propose to occupy a good portion of the time in consideration of the subject of diagnosis. There is probably no class of cases in which greater difficulties present themselves in arriving at an accurate diagnosis and imparting means for determining it to others, than in those affecting the pelvic organs in women. The organs most generally affected with disease are enclosed within the cavity of the body and only a part of them are to a limited degree visible, and variations in their structure must be determined to a large degree, by touch. When we consider how inaccessible they are and the difficulties attending their being outlined and manipulated, we can appreciate the uncertainty of diagnosis and the possibility of frequent mistakes; indeed, there are many abdominal growths in which even the most careful and practiced diagnostician will be led into error and it is only after the patient is subjected to exploratory incision that we can absolutely determine the pathological state.

The first patient I bring before you is a woman 57 years of age, who has been suffering from some abdominal distension for a number of years. I have not, as yet, had an opportunity to examine her and we will now do so together. The procedure is usually divided for purposes of convenience and description into inspection, palpation, percussion and auscultation. This may be followed by exploratory puncture or exploratory incision. I would not have you understand that these different processes must be followed out separately and individually, for we may very readily accomplish the inspection while palpatation or percussion is practiced. The first step, however, in examination of a patient will be to obtain her history. In so doing we learn the course of development of the disease, the influence it has had upon her general health, the relations it has displayed to certain organs, and we may form in this way some inference as to the actual seat of the disease. In acertaining the history, we take note of the age, for the reason that many diseased conditions are influenced by it; the period of life in which the individual is most likely to suffer from uterine diseases and consequently be necessitated to submit to an examination, will most likely be during the menstrual life. Prior to puberty, it is rarely necessary to make a physical examination. It is true a patient may be the victim of an ovarian cyst; or we may have collections of blood, retained menses, or a woman may be pregnant, before the menses have appeared. Examinations subsequent to the menopause are also less frequent, though disordered conditions which may be attributed to the genital organs, then demand more urgent and prompt examination than in earlier years. You would inquire as to whether the patient was married or single, her general health, and then come to the consideration of the performance of the special functions. Any diseased conditions of the pelvic organs will necessarily influence the performance of their functions. These functions, as you know, consist of menstruation, conception, and gestation. Diseased conditions will interfere with the performance of the menstrual function, rendering it irregular, scanty, or absent, excessive, or a flow occurring without any reference to the menstruation. It may be painful, this pain preceding, accompanying or following the flow. The intervals may be attended with a profuse leucorrhœal discharge varying in color and appearance. A woman though married, may be sterile. She may become pregnant and be subject to habitual abortion. All such phenomena will have been ascertained by the history, and the presence of any of these disturbances will lead you to realize the necessity of subjecting the patient to an examination. A careful observer may possibly have determined the diagnosis during the time the history has thus been made up; but it is important not to be governed by such conclusions, but make the examination a thorough one, and only arrive at a conclusion after all the evidence has been presented, whether ascertained through the history of the patient or by physical signs. As we have said, much may be determined of the patient's condition by a careful observation. Thus, if a patient enters your consulting room, having a large prominent abdomen, and a healthy appearance of the skin, you would possibly suppose her to be pregnant. If her face is anæmic, somewhat swollen and puffy, if she moves awkwardly, and looks depressed, you would suspect her to have a deranged condition of the kidneys, and the distension to be due to ascites; or, if with a very prominent abdomen, the face is emaciated, thin and drawn, you would ascribe it to what is known as facies ovarianæ, and suspect an ovarian cyst. These may be considered to be the indices of disease, but should not, as we have said, lead you to hasty conclusions or to determine absolutely your diagnosis until examination had been completed.

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*Clinical Lecture delivered at the Jefferson Medical College Hospital, September 26th, 1893.

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Having ascertained the history of the patient, elicited symptoms of disease and determined that there is some disorder of the abdomen or pelvis requiring physical examination, you will have your patient loosen her clothing, and if possible have had the bowels and bladder emptied, place her upon a bed, table or couch, expose the abdomen, drawing a sheet over the lower extremities and closely around the pelvis so as to prevent unnecessary exposure. Having exposed the abdomen, we are in a position to begin our examination by inspection. Through this step we are enabled to observe the amount of distension, the portion of the abdomen most prominent, the regularity of the mass, whether it is symmetrical or situated to one side, discolorations upon the skin, whether as a result of medicaments, counter irritants, or from too great tension upon it, leading to rupture of the rete malpighii and the formation of what is known as the lineæ striatæ These latter markings are very frequent in pregnancy, indeed, it is rare for a women to complete gestation without their occurrence. They have no special significance, further than that they indicate the abdomen has been sufficiently distended to lead to rupture of its middle layer. They may be found also in women with fat abdomens as a result of obesity, in women who have not born children, or from any other abdominal distension, such as a fibroid, ovarian tumor, or ascites. Not unfrequently you see in the median line, particularly in dark skinned women, a discoloration which is known as the linea nigra, extending from the symphysis to the umbilicus and sometimes to the xiphoid appendix. This line is very frequent in first pregnancies and subsequently remains. It also occurs as a result of uterine and ovarian disease. The discolorations arising from counter irritants should be noted, as they afford inferences regarding inflammatory attacks. In noting the distension of the abdomen it is well to take into consideration the portion most prominent, which indicates to a certain degree the situation of the tumor. In doing this, for purposes of more accurate study and observation, we are accustomed to divide the abdomen by imaginary lines into nine spaces, and remembering the viscera that are to be found in the different tracts of the abdomen, we are enabled to form an inference as to the particular organs involved in any individual growth. Inspection is followed by palpation, or the latter may take place during the time we are inspecting the surface. Palpation is practiced by placing the fingers of the two hands, previously washed and warmed, over the abdominal surface, sometimes bringing the entire mass between the fingers, and at other times moving them close together; in so doing we determine the sensation of fluctuation. By inspection we may frequently witness the protrusion of the abdomen, resulting from the movements of the fetus within it, and this may be readily recognized by palpation. In addition, this enables us to appreciate the sign pointed out by Braxton Hicks, of the regular rhythmical contractions and relaxations of the uterus distended by pregnancy. Fluctuation and wave-like motion is determined by placing the hands upon one side of the abdomen and gently striking the opposite side of the abdomen with the other hand. A wave of fluctuation will differ in length according to whether the cyst is a single one, or made up of a number of smaller cysts. A shorter wave of fluctuation indicates that it is made up of a number of cysts, or the cyst wall is divided by a number of partitions, and these may be so numerous that instead of fluctuation we will have an indistinct sensation of elasticity, leading us to recognize that we have not a solid tumor. Any irregularities or projections from the surface of the tumor are readily recognized as it is being palpated.

We come now to the consideration of percussion. This is of special value in differential diagnosis between solid and cystic growths and fluid that is free in the abdominal cavity. Thus, in ascites, though it may lead to marked distension of the abdomen, yet upon percussion the zone of resonance will be found at the summit of greatest distention, while around the sides dullness will result. This is due to the fact that the intestines being filled with gas are lighter than the fluid and consequently float to the surface. There is, however, a possibility of error in this in marked distension, as the mesentery may be too short to permit the intestine to come in contact with the abdominal walls. A layer of fluid consequently intervenes, giving dulness upon percussion. If the percussed finger is pressed deeply into the abdomen, the intervening layer of fluid will be displaced and resonance result, hence dullness upon superficial and resonance upon deep percussion. In fluid contained within a cyst, as it increases in size the intestines will be pushed upward and to the opposite side, so that we shall have resonance upon one flank. This resonance indicates that the tumor has probably arisen from the opposite side. In ascites it will be remembered also, that the level of resonance will vary with the position of the patient, while in a solid or cystic growth, it does not change. The importance of these signs cannot be over-estimated and should always be taken into consideration in every case. That it is not always appreciated I can demonatrate to you by a recent case of my own experience. A woman 42 years of age, had had an abdominal distention for 18 years. This had been diagnosed as a cyst years ago and an operation advised but refused. Several weeks before she came under my observation she had been confined to bed suffering from pain, marked elevation of temperature, reaching at times as high as 103°; she had become emaciated and much enfeebled. The abdomen was very prominent and was nearly symmetrically developed and fluctuation was very distinct. In percussing over the abdomen there was a peculiar resonant note extending well up over the left side. This note was that of a canal containing air, the walls of which were pressed in contact by percussion. It was recognized as probably the colon, but its particular significance was not estimated. The length of time the cyst had been in development led me to suppose that I had to deal with a parovarian cyst. The patient was subjected to operation, and upon opening the abdomen, the peritoneum was recognized as covering the portion of the cyst exposed. The opening was enlarged, hand passed over the mass and it was found that so far as it could be reached, it was covered with peritoneum. The trocar was introduced, drawing off four gallons of fluid; peritoneum was found open and the cyst wall enucleated, removing a mass which weighed 18 pounds, without having ligated a single vessel. Looking into the cavity after its removal, the whole left side of the abdomen was laid bare behind the peritoneum from the diaphram to the pelvis. The left kidney projected as a cyst into the surface. Its vessels consequently were ligated and the organ removed. It was found to be a sacculated kidney. Now, the point I wish to make with reference to this case was, that had we appreciated the significance of the situation of the colon, and its relation to this mass, we would recognize that we had to deal not with a parovarian or ovarian cyst, but what was actually present, a retroperitoneal cyst. Such recognition might in some cases have been of advantage in leading us to have made our incision in such a way as to open the peritoneum outside of the colon, instead of within it, as we did in this case, thus increasing possibly the peril of the patient by diminishing the chances for the nutrition of the large intestine. Fortunately, however, in this patient there was no inconvenience experienced, and though the operation was done over three weeks ago, the patient has recovered as rapidly as she would after the removal of an ordinary uncomplicated cyst.

Auscultation in abdominal work is of advantage in enabling us to hear the blood coursing through the uterine sinuses and to determine the fetal heart sounds. The latter symptom, once heard, can be mistaken for no other, and would of course determine absolutely the presence of pregnancy, even though a tumor were present. Having thus considered the method of determining the symptoms, we return to the patient before us and endeavor to put in practice what we have just discussed and thus ascertain if possible the character of the abdominal distension. As we look at the abdomen, we notice that it is not symmetrical; it is much more prominent upon the left side, and as I pass my hand over it I feel an irregularity or mass projecting from a hard, firm growth. This growth extends down into the pelvis, evidently showing that the tumor has arisen from below and developed upward. This is indicated, also, by the intestines having been pushed upward and to one side. You notice, also, that the tumor is movable, can be moved from side to side and pushed upward. The age of the patient, over fifty years, would exclude the probability of pregnancy; then, too, as we return to the history of the patient we find that it has been in existence for fifteen years. This, taken together with its size and resistance, will eliminate the probability of pregnancy and at the same time demonstrate that we have a solid tumor which has arisen from the pelvic organs.

Now, the only organs in the pelvis from which solid tumors are likely to arise are the uterus or the ovaries. That this tumor was not an ovarian growth may be concluded, first, from the fact that such growths of the ovary are rare and do not attain to a size such as this patient presents. unless from malignant disease. Such a growth would not have been in existence for so long a time and would have given rise to much more pronounced constitutional symptoms. Her Her menses ceased at fifty-two; this was a prolongation of the climacteric, but not an unusual one in women who suffer from uterine growths. The presence of such a growth keeps up the congestion in the organ and consequently the prolongation of the menstruation. Now, as we return to the history, we find that this patient has not suffered from severe hemorrhages. Her menses ceased five years ago, and she has had no return. While we do not have any history of hemorrhage, we have no hesitancy in believing this to be a fibroid tumor of the uterus. You will remember that the class of tumors which are most likely to give rise to hemorrhage are those fibroids which have had their origin near to the internal surface of the uterus, and as they have subsequently developed have pushed the mucous membrane before them, interfering with its circulation and thus cause hemorrhage to take place. The relation of this tumor to the uterus and the other pelvic organs could be determined more accurately by a vaginal examination in conjunction with abdominal palpation. Indeed, we would not proceed to an operation in such a case without having had a preliminary vaginal examination.

Prolapsus Uteri. The next patient I bring before you is a woman sixty-four years of age, who has suffered from a protrusion of the vulva. As she lies upon her back and the limbs are separated you see a mass lying between them which covers over the vulvar orifice. In looking at this mass you will notice anteriorly an opening looking directly forward, which you will recognize as the external os. As I place my hand over it posteriorly I find that the uterus had been retroverted and displaced and that the entire posterior wall of the vagina is inverted. We have consequently, a hernia of the uterus and vagina. As I place my hand upon its posterior surface and push up so as to place the uterus parallel to the axis of the canal of the pelvis, we can readily reduce the hernia. Having placed the uterus in this position, by pushing upon it the entire surface is carried backward and the organ replaced. Of course the mildest effort at straining or assumption of the upright position leads to its redevelopment. The patient cannot be in a much more uncomfortable state than with such a displacement. The organ protruded between the limbs, is subjected to friction against the clothing and against the limbs, the urine and feces flow over it, the thorough evacuation of the bladder cannot be readily accomplished, portions of urine remain, decomposing and producing irritation; in some cases this leading to the formation of deposits and the development of large calculi. The interference with the circulation in the prolapsed tumor not unfrequently leads to ulceration of its surface, so that a large portion of it is ulcerated. In a woman 64 years of age, the outlook for a recovery after operation is not good; even should temporary cure be secured, the tissue will soon break down by pressure and the condition redevelop. In this patient we would prefer to advise her to have some form of pessary with external support by means of which the organ can be raised and kept up, thus giving her relief for the few remaining years of life that may be spared her.

COMMUNICATIONS.

"CICATRICIAL STRICTURE OF PYLORUS; PYLOROPLASTY."*

A. M. CARTLEDGE, M. D., Louisville, Ky.

J. F., age thirty-eight years, native of Germany, presented himself to my notice Sepetember 7th, 1893, with the following personal history. He was a robust youth and enjoyed perfect health until twenty-six years of age. At this time he observed (as he remembers) the rather sudden appearance of pain near the center of his stomach. This pain was intermittent in character but at times very severe. The services of several physicians failed to relieve him. Some four years later when about thirty years of age, he noticed the location of greatest pain and tenderness had shifted to a slightly lower plane, and more to the right (his description and location placing it about the liver notch). So far as he could remember this change in the situation of pain was gradual. The subsequent eight years of his history is one of varied suffering and symptoms. The intermission of the pain and a fixed and constant tenderness were always characteristic. During these years he noticed the passage per rectum of large quantities of a gritty substance resembling sand. Dejection of spirits and progressive emaciation were pronounced; no nausea or vomiting; appetite usually poor but variable; thinks he was slightly jaundiced two years ago. The physicians diagnosed "gall stones." From January 1st., 1892, to October of same year, suffered pain almost constantly, was unable to attend to any business. At this time, October, 1892, was examined by several physicians with a view to operation. One of these, a surgeon, gave him great pain in manipulating the affected region. He was told to examine his stools and save any concretions that might pass. Two days after he found in a fecal evacuation a large size ordinary pin, much augmented in size by the adherence of deposit. He felt much relieved after the passage of the pin; the nagging and lacinating character of the pain left him, also a swelling that the physicians and he could distinctly feel before. His improvement, however, did not lead to health restoration. Pain and discomfort together with some tenderness remained. and has shown no disposition to lessen during the past year.

PRESENT STATUS:

A man fairly nourished, of good color, sad expression, tenderness over region of gall bladder, and to the left. Deep palpation detects a slight enlargement in region of gall bladder Palpation and percussion reveal an enormous distension of stomach, extending from the fifth intercostal space to a line on a level with the umbilicus upon the left side. Heart's action unusually slow and steady, no murmur, pulse 60, no vertigo or other cerebral manifestations.

Diagnosis uncertain; certainly there was stenosis in pyloric region, with everything pointing to it being of cicatricial origin. There was a possible gall bladder trouble in addition. With a plain statement of the facts to the patient, an exploratory operation was advised, and accepted.

September 11th, assisted by Drs. Sherrill, Satterwhite and Buren, the operation was performed. The usual incision for exposing the gall bladder was first made. The organ was found comfortably distended, but soft and pliable, palpation detected nothing but fluid in the cavity. To make doubly sure that this fluid was bile and that no obstruction existed, the needle of a hypodermic syringe was introduced and pure bile withdrawn.

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*Abstract of Essay read before meeting of Louisville Medico-Chirurgical Society, September, 1893.

A semicircular incision was now joined to the upper angle of the first cut, the convexity directed downward and carried to about the center of the epigastric space. This incision severed the right rectus completely. The distended and dilated stomach soon presented and was with difficulty kept back by flat sponges. A search was made for the pylorus, which was with some difficulty found. A marked thickening and induration was found, but very narrow, not more than one-half inch in width. There seemed to be an unusual fixity of the pylorus, rendering its exposure difficult. The operation of pyloroplasty devised by Heineke and later by Mikulicz was performed.

Upon opening the stomach there was quite a little gush of mucus, nothing else, and there was a very notable collapse of the stomach from the gas that passed out. The stomach up to this time was enormous in size as I have already stated, but could be easily compressed after the opening by the use of a flat sponge. After suturing, the edges a strip of gauze was carried down to the point of suture and brought up and out at the middle of the wound. I did this not that I feared so much the ability of my suture to hold, but from the fact that there had been an escape of mucus and I feared infection of this region and preferred to practice drainage. There was considerable hemorrhage from the surrounding structures in handling the stomach, and getting this out was attended with considerable difficulty, consequently I deemed it advisable to insert the gauze. The lower angle of the wound was drained in the same way. The progress of the case was not as uneventful as I would like; the man developed some fever, temperature 102 F., he has suffered considerable pain necessitating the use of some morphia at various times; has taken probably about one and one-half grains at different times since the operation. Recovery seems now assured; there is no evidence of leakage whatever. The patient was nourished exclusively by the rectum with peptonized milk for three days. The least possible amount of water was given by the stomach. He was then given beef tea, later peptonized milk by the mouth, and now for four days he has been taking strained soups, etc. As already stated there has been no evidence of leakage up to the present time, and certainly there is no reason to expect there will be any now. There is still some little discharge at the point where the gauze points down to the pylorus; the lower drainage wound has entirely healed.

At the time this operation was first brought out, it struck me as being one of great interest. First, the ingenuity of the operation; second, the fact that physicians are very apt to overlook the very common occurrence of pyloric stenosis the result of cicatricial contractions. There are a great many characteristic symptoms representing pyloric obstruction, which might easily be overlooked on the ground that we have heretofore called these "gastric catarrh," where we have atony of the gastric walls as a result of catarrhal condition.

This operation for the few times it has been performed, is certainly successful. Heretofore, as you are probably aware, the operation of Loreta was most common, that consisted of making an incision in the stomach near the pylorus, and, if any stricture of the pylorus was located, it was divulsed and then the wound in the stomach was closed. This operation was found to be followed by about the same results that divulsion of stricture in other portions of the body; that is, there was a speedy return of the trouble—contraction of the divulsed structures soon took place and the patient relapsed to his former condition. In the future if we look out, I think we will find many more cases of pyloric stenosis than we have heretofore supposed.

In the case reported by me to-night, the patient never had any nausea or vomiting; the trouble was cicatricial stenosis as the operation proved beyond a doubt. Another interesting feature was the pin; there can be no doubt but this pin was lodged in the stomach for the last eight years, although the patient has no recollection of ever swallowing it, and the last four years it has been near the pylorus. The changes in character and location of the pain I take it were due to the migration of this pin, and the continuance of distressing symptoms after passage of the pin per rectum was owing to cicatrization in the pyloric region causing stenosis in this locality.

NOTE. The patient has since made a very happy recovery.

THE IMPORTANCE OF EARLY ATTENTION TO THE DISABILITY CAUSED BY INFANTILE PARALYSIS.*

A. B. JUDSON, M. D.

I propose to consider briefly the question whether a certain class of patients should not be committed more entirely and more early than they are to the care of the orthopedic surgeon, a consideration as interesting to the family physician as to the orthopedist, as they meet in a friendly alliance to secure the greatest benefit for their common patient.

I refer to patients disabled by infantile paralysis. The child has passed through stage of onset. Ergot, electricity and massage have produced their legitimate effect, and we will say that the eighteen months, which are believed to be the limit of spontaneous recovery from the paralysis, are passed. The friends and the patient, with many grievous misgivings, have become reconciled, or at least accustomed, to disability and deformity which now seem to change for neither the better nor the worse. What can now be done? The question whether such a patient may not yet receive benefit from the advance of scientific knowledge, or from the daily increasing facilities for the application of knowledge, will surely spring up in the parental heart.

Now it is curious to note that the deformity in these cases is often found, upon analysis, to be a disability more than a deformity. Take a case, for example, in which the knee cannot be completely extended. When the patient is sitting there is no deformity, but when he stands the apparent deformity is due to a disability —an inability to extend the knee. How easy it would have been to prevent contraction of the hamstrings by providing for their repeated elongation by complete extension of the knee, easy comparatively for one who has given himself to such details and is habitually mindful of their importance and free from the manifold cares which beset the average practitioner. And it should be borne in mind that cases sometimes occur in which shortening of the tendons begins, in a manner not well understood, at a very early stage, before simple desuetude can be fairly accused of being the author of the mischief. The prevention of muscular and tendinous shortening then should receive attention on the part of the early observer of the case. It is not an obscure and difficult point, but one which has perhaps escaped the consideration to which it is entitled.

To recur to the disabled knee, and this part of the anatomy is used simply as a convenient example to illustrate points in pathology and treatment applicable to all the joints, if the knee is kept extended at those times when walking is attempted, not only are the muscles and tendons kept in normal elongation, but the general welfare of the limb is assured. Neglected patients may be seen in the streets walking laboriously, with extension of the knee produced by the hand pressed firmly, at every step, on the lower part of the thigh when the weight of the body is on that limb. It is doubtful whether this in any case prevents the final resort to a crutch, by the use of which the limb is made to dangle, being carried about as a worse than useless burden, twining limb around the crutch, subject to the painful affections which attack the lower extremities in cold weather in the absence of healthy circulation, and more and more impeding locomotion until, as has happened many times, the adult patient seeks relief and improved locomotor ability in amputation and an artificial limb. If the knee is stiffened mechanically the pressure of the weight of the body in standing and the repeated concussion of the limb, as the foot strikes the ground in walking or running, will improve the tardy circulation, but beyond this, and better than this, will be the development of unused muscular fibres and special groups of muscles, by whose action important motions will be acquired which would have been impossible if the limb had remained in suspension.

Now in order to keep the knee firmly extended under the weight of the body in standing and walking, and to give use and development, as far as may be, to the fragmentary muscular system of the limb, apparatus is required; but it will not be obtained without authorative medical advice and prescription, and as a rule the family physician cannot be expected to work out the tedious processes incident to treatment of this kind. It falls to the lot of the specialist, who can well bear the inconvenience attending final results which are more or less imperfect, after satisfying himself that he has done all that science permits to be done, and whose daily and hourly mastery of the necessary details has enabled him to reduce perplexing and complicating conditions to familiar routine. Treatment of this kind lies far outside ordinary practice in which the physician renders such signal service. He makes his diagnosis, advises, prescribes, remains on guard against complications, forsees the crisis and prepares for it, leads the way cheerfully through convalescence, and medical science, so dear to us all, finds but another illustration of its power and beneficence. In one home a wasting fever has been finally resolved and the patient rises in perfect health from a bed where the grim alternative has been decided in his favor. In another the children have been happily carried through the perils of infection and resume their places at the table. But in the special practice adapted to the cases under consideration there is no fear of a fatal result and no rejoicing, and the object sought is at the best a palliation. But who will say that important service has not been rendered? For it should be remembered that the conservative and plodding practitioner along this line has for an ally one of the most potent influences in Nature in the growth of the body. The popular reliance on this force, expressed in the common question—"Will the child not outgrow the ailment?", whatever it may be, is not always misplaced. Happy the physician who, imparting his confidence to the patient's friends, and relying on the exact science of the physicist, sees grace and power growing out of deformity and helplessness.

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*Read before the New York Academy of Medicine, November 2, 1893.

A good general rule in the treatment of deformity in a growing child is to keep the part as near as possible in the desired shape as much of the time, day and night, as is practicable, so that the increment shall be on the right side of the dividing line between the normal and abnormal. The familiar proverb says: "As the twig is bent, the tree's inclined." In the troubles following infantile paralysis the principle should be extended. We should not only persist in keeping the part as near the normal shape as we can, but we should also give as wide play, as the crippled condition of the limb will allow, to the functions of motion and weight-bearing. From the very earliest attempt to walk, or to make use of the muscles and joints which are imperilled by the cord lesion, extraneous assistance should be afforded. It should not be said, offhand, that the child is too young. The first and repeated question should be: Is the child not yet old enough, or is he not already giving sufficient evidence of a desire to make use of the questionable muscles and joints to make assistance desirable or necessary?

When efficient treatment is begun it is easily continued. Improved ability is at once appreciated by both parent and child. It is well that such is the fact, for improvement does not stop with infancy or childhood. The process is slow and prosaic, but the benefit cannot be overestimated in the opinion of the one who is in the best position to judge of its value. A slight improvement in the gait, or ability to walk a little faster or a little further without fatigue, confers lasting happiness, and the patient and physician are thus encouraged to go on to new achievements until, with one step after another gained, the outcome is an adult well able to follow the ordinary pursuits of life, in place of a being who had looked forward to hopeless dependence.

A famous surgeon went once to see a lunatic in a private asylum, and in passing through a corridor, he was thus accosted by one of the patients: "Take off your hat, sir?" "Why should I?" he asked. "Because I am the son of the Emperor of the French." "Oh, I beg your Royal Highness' pardon," apologized my friend, taking his hat off. On revisiting the asylum a month or so later he was again accosted in the same corridor by the son of the Emperor of the French, and in the same words: "Take off your hat, sir." "Why," asked my friend. "Because I am the son of the Emperor of Germany." "Surely when I last had the honor to see your Royal Highness you were the son of the Emperor of the French?" "Ah, yes," he added, "That was by another mother."

A DEPARTURE IN THE TREATMENT OF BRIGHT'S DISEASE.

W. H. WALLING, M. D., PHILADELPHIA.

The pathology of this affection will not be considered further than to state that in many cases diagnosed as Bright's disease, the lesion may be in the heart and not in the kidneys, the albumen being the result of a passive congestion in the kidneys, due to a defective circulation. In such cases a proper regulation of the circulation will materially reduce, if not altogether remove the albumen.

The diet is of prime importance in the treatment of albuminuria. Eminent authorities direct milk, vegetables, white meat of chicken, eggs, but little or no beef or other meat. One prominent practitioner recommended the albumin of eggs, but forbade the use of the yolks, while another reversed this order, and forbade milk, but allowed butter. Taking these various recommendations into consideration I concluded to give each method a fair trial in a case of albuminuria and carefully note the result.

The fact that chronic Bright's disease existed was shown by repeated examinations both chemically and microscopically, as well as by high tension of the pulse and other symptoms. The amount of albumen was about one per cent.

Treatment was commenced in Dec., 1892, and consisted at first of steam baths and electricity, with tri-weekly sittings, which kept the skin in good condition and tended to relieve the kidneys. The various drugs used in such lesion were administered *pro re nata.*

The diet consisted of vegetables, eggs, stale bread, chicken, oysters, some milk, but with little meat. The appetite was very capricious and but little could be eaten. Flatulance; nausea (sometimes amounting to vomiting of fermented food); general distress; headache of a severe type, were constant factors. There was also a severe hyperesthesia of the rectum vagina and urethra. Sleep had to be induced by various hypnotics, chloralamid proving to be the most powerful of all used and very satisfactory. Opiates were not resorted to except in a very few instances to control excessive pain.

After several months of the regulation diet, the patient was placed upon an exclusive meat diet, after the method of Dr. Salisbury, which consists of lean beef finely chopped in a suitable machine, after having all the fibrinous and fatty portions removed. It was then broiled quickly, served hot, being salted to taste. A little butter was allowed; toasted brown bread, tea or coffee with a little milk but no sugar, constituted the balance of the diet. One hour before each meal, and at bed-time one or two cupfuls of hot water acidulated with lemon juice, were given. Fruit was added when peaches came into market. The appetite improved, strength began to return, there was no more nausea, and but little flatulence.

Iron being prescribed by all authorities, I looked about for the most readily assimilable, palatable, and convenient form in which to administer it, and found it in the *albuminate* of iron, which was brought to my notice by reading reports of its use in European medical journals. This had a most marked effect upon the character of the blood, as shown by the great increase of the red blood corpuscles. For a time iron was omitted the want of it being at once felt.

Again, to more fully test the value of the beef diet, it was discontinued for about two weeks, and eggs, vegetables, etc, given, the result being a return of nausea, loss of appetite, flatulence, an increase of distressing heart symptoms, and a general decline in vitality. A return to the strict beef diet, with some fruit, and the iron as above, the appetite rapidly returned, and the strength correspondingly increased.

The albumen, which had been reduced to 0.50 per cent. increased during the cessation of the beef and iron to 0.65 per cent. declining again upon their resumption.

As a heart tonic I have given granules of digitaline gr. $\frac{1}{67}$ or strophanthin gr. $\frac{1}{500}$ with nitro-glycerine granules $\frac{15}{12}$ as indicated. A combination of several of the more important heart tonics has also been very useful.

Contrary to an opinion expressed by some practitioners, the hyperæsthesia alluded to was not caused by the beef diet, as it existed long before that was entered upon, and was lessened by it. Local applications of iodoform were attempted, but quickly abandoned, as that drug greatly aggravated the condition. Aristol, administered in hollow suppositories or gelatine, served a much better purpose.

I shall continue the treatment so long as the patient continues to improve under it, which she is now steadily doing.

I have placed patients suffering from locomotor ataxia, spinal irritation, Parkinson's disease and other kindred disorders, upon the exclusive meat diet, with great benefit. The use of the hot water one hour before meals and at bed-time is essential in most cases. Lemon juice to taste is desirable. It may also be used on the meat in place of vinegar.

A rigid adherence to the diet as prescribed by the physician is essential to a cure.

SOCIETY REPORTS.

THE LOUISVILE MEDICO-CHIRURGICAL SOCIETY.

Meeting of September 22, 1893.

CASE OF DOUBLE HYDROCELE.

Dr. W. L. Rodman: This gentleman, forty years of age, comes from the southern part of the State, and presents a condition that, as far as my experience is concerned, is rather uncommon, especially in a man of this age. Four weeks ago he noticed a swelling in the right side of the scrotum and now the enlargement extends to both sides but is not so marked in the left. I have made diagnosis of double hydrocele. The right side presents the typical appearance and shape of a hydrocele, so tense that fluctuation is elicited with difficulty. The amount of fluid in the left side is not great, yet there is some. The patient thinks that the tumor of the left side varies considerably in size and position. I made a careful examination with the patient in the recumbent position but was unable to produce any appreciable diminution in the size of the tumor by manipulation. Another interesting feature is that the trouble began only four weeks ago; I think it is unusual to find a hydrocele attain such size as this has done in the right side in so short a time. There is no history of traumatism, or other assignable cause for the trouble.

I shall perform the same operation that I usually do in cases of this character, *i. e.* inject carbolic acid.

DISCUSSION.

Dr. A. M. Cartledge: I have seen several cases of double hydrocele, but they have usually been in older men, and followed degenerations from epididymitis, etc., but the history of this case dating back only four weeks, attaining the size it has in that length of time, and the peculiar feeling of the left side which is not so developed, I think throws at least a suggestion upon the case. The cord structures of the left side seem to be very much enlarged. The vas and blood vessels also. I take it that we have, in this case, a purely symptomatic hydrocele, and there are serious changes going on within the structures of the scrotum. Of course little can be told in regard to the right side until the water is drawn off. The left side presents several suggestive features. I think that it is probably an acute tubercular lesion. From the feeling, the left side would indicate extensive infiltration of the cord structures with tubercle, and I believe Doctor Rodman will find the same condition existing on the right side after withdrawing the water. In my judgment the whole trouble is the result of changes purely in the cord structures, affecting the circulation,

Dr. W. O. Roberts: As the trouble has existed for so short a time, I asked the question when he was examining the tumor, whether there was any hardness about the cord or epididymis. I think it is possibly symptomatic. It has come on too rapidly to be simply a pure hydrocele.

Dr. W. C. Dugan: (Visiting) I take it that this case is peculiar, inasmuch as both sides are involved. But I have seen in the last two years, two cases of acute hydrocele in old men, that came on in a few hours. One of them I remember developed in three or four hours; the patient was thought to have a strangulated hernia. The tumor on one side was as large as a child's head, containing over a quart of very clear fluid. Believing the testicle was diseased I removed it and the cord, very high up. There was no evidence of any pathological lesion at all in that case revealed on the most careful examination after removal. It was much atrophied as would be expected in very old men. The cause of the trouble I am unable to explain, but that such conditions are met with is known to every practical surgeon.

Dr. W. L. Rodman: The left side as Drs. Cartledge and Roberts state, presents an unusual appearance, and it led me to make a very careful examination. The right side seems to be a typical hydrocele. I admit that the course of this trouble is unusual, and, yet, it is a fact that we do have acute and chronic hydroceles. While it will not often be found that a case of hydrocele will attain such a volume in four weeks, they do run such a rapid course at times. I am inclined to think this is simply a double hydrocele without any tuberculous lesion at all. The man's age is rather against tubercular change in this region. Young subjects are more apt to present tubercular epididymitis than men forty years of age, and while I admit that the condition is a little unusual, at the same time I think that this is simply a double hydrocele of the acute variety. I have seen hydrocele appear and disappear inside of a week or ten days; they sometimes come on very rapidly. Hydroceles which pursue this course are, as a rule, small, and absorption is rapid. I do not believe there is any tuberculous change in this case, but I shall make a very careful examination to-morrow when I operate on him, and report at the next meeting. One point I neglected to mention in giving the history of the case is, the man has never had any pain in the testes, and no fever.

SUPRAPUBIC CYSTOTOMY FOR REMOVAL OF TWO STONES FROM BLADDER.

Dr. J. L. Howard: I present here two stones removed from the bladder of a man seventy-three years of age, by the supra-pubic operation. The only interesting feature about the case is the character of the stones. I had one of them cut in two. It shows the uric acid nucleus beautifully; one layer of uric acid, then a layer of lime.

DISCUSSION.

Dr. W. O. Roberts: Nearly always in old men the stone is phosphatic in character. I removed three stones from the bladder of a man sixty-seven years of age, and two of them were decidedly phosphatic, the third mixed. I would like to ask Dr. Howard if his patient had any difficulty in passing water from prostatic troubles.

Dr. J. L. Howard: At the time of the operation he had no prostatic trouble whatever; however he had a prostatic enlargement secondary to the operation. About a week afterward, in attempting to close the external wound by tying a catheter in the urethra, I found it impossible to insert a straight catheter, but finally succeeded in passing a prostatic catheter. The enlargement subsided in about ten days. The drainage employed was gauze; the abdominal wound united readily, and the patient had no trouble in passing water for the last three weeks. The operation was performed six weeks ago. He passes water now only about every three or four hours, while heretofore it was every few minutes.

Dr. W. L. Rodman: I assisted Dr. Howard in the operation referred to, and saw the patient about a month thereafter, and he was entirely relieved of all symptoms. I have never seen a case of lithotomy followed by better results.

Dr. W. O. Roberts: Do you know whether this man had any history of renal colic at any time?

Dr. J. L. Howard: No such history could be elicited.

FATTY TUMOR.

Dr. W. O. Roberts: I have a specimen here not much in itself, but of interest because of the location in which it was found. The patient was a child three years old. This tumor was first noticed two years ago—that is when the child was one year old—located on the palmar surface of the hand between the fourth and fifth metacarpel bones, near the phalangeal articulation. I saw it for the first time about a month ago. It was then of considerable size and kept the fourth and fifth fingers widely separated by its pressure. Upon examination I was led to believe from the location of the growth and from the hardness of it, that it was an enchondroma, but when it was cut down upon, much to my surprise I found it to be simply a fatty tumor.

DISCUSSION.

Dr. W. L. Rodman: This is one of the regions of fatty tumors, but enchondroma are much more common. The fleshy part of the palm is the only portion of the hand where lipomas are found.

Dr. W. O. Roberts: Some time ago I removed one three times as large, from the ischio-rectal fossa of a child three years of age.

IRREDUCIBLE HERNIA—OPERATION; ABSCESS OF THE OMENTAL STUMP—RECOVERY.

Dr. W. L. Rodman: This specimen was removed from a gentleman thirty-three years of age, who had had a hernia upon the right side for several years. It had been reducible until a few years before he was brought to me. It had become irreducible, the patient was having considerable pain, and while the physician in attendance did not think the hernia was strangulated, yet he believed it was a favorable case for operation. It was a very large epiplocele, the largest I think, that I have ever seen. The omentum was so large that I divided it into four equal sections and ligated each with cat-gut. The operation was done after the method of Kocher, of Berne. I have done quite a number of similar operations in the last year, and all of them have done absolutely well, except this one. The man is now perfectly well. He did not have a bad symptom until the thirteenth day. Then I noticed a swelling in the right iliac region and I at once thought there was some trouble with the omental stump. A short time before performing this operation I had read an article by W. T. Bull, of New York, in the *Annals of Surgery*, in which he calls attention to this complication. So far as I know he is the only one that has done so. He reported two or three cases; one in which an abscess of the omental stump occurred as late as six months after the original operation. This is what occurred in the case reported by me to-night. After the tumor attained the size of a doubled fist, it broke; he has since had entire relief and there has not been a bad symptom. It is the first time I have seen a complication of this kind, and would have been at a loss to understand it had I not read Bull's article a few weeks before. The stump was ligated with catgut and the sac, ligated with silk was pulled out so as not to leave an infundibulum to induce return of the hernia. In none of the cases upon which I have operated, has there been any return of the hernia. The first operation I did according to this method was eighteen months ago. I have had no death.

DISCUSSION.

Dr. A. M. Cartledge: I was especially interested in the report of cases by Bull, referred to by Dr. Rodman, concerning trouble with the omental stump, as I had recently had two. One was a very large epiplocele in an old woman; the whole mass was carefully ligated away, and the stump returned. Later she developed (the hernia was on the right side) quite an induration high up in the abdomen, which was very sore and tender, and I was at a loss to know its true nature. Just about that time Bull's article appeared, and I at once recognized that the trouble was in the omental stump. The patient had several attacks of circumscribed peritonitis, which finally subsided and she made a good recovery.

The other case was one following a ventral hernia that occurred after laparotomy had been performed twice. The third time it was followed by a ventral hernia, and upon opening up the structures it was found that the omentum was adherent in the left iliac fossa, having become very tense and thick. This was stripped up, the lower attachment tied off with a silk ligature and the operation completed. Subsequently this woman developed a hard induration in the left side of the abdomen, which finally led to another exploration. I thought I could demonstrate the existence of pus. There was some elevation of temperature, going as high as 101° F. After several months I made an incision and we were very much puzzled because of the extent of the induration and its location, it being so low down. After searching thoroughly and finding nothing, I simply had to close the wound. However, I inserted a small gauze drain at the bottom. This remained for some days and was then removed. She seemed somewhat better and went home. Every night the opening where the gauze drain came out would fill with serum and discharge. This kept up for five or six weeks, and finally the old silk ligature that was around the omentum came away. Since that time she has been perfectly well, showing that the irritation was really due to the silk ligature around the omental stump.

I believe in these cases cat-gut instead of silk should be used as material for ligature and, in tying off large masses, the omentum should be divided into sections. I can look back now, and see other cases where the omental stump has probably been the cause of trouble, but these two cases occurred just prior to the publication of Bull's report of three cases which terminated in resolution, and one in death—a total of four cases. One of mine terminated in resolution after passage of the silk ligature; the other terminated in resolution after rest, warm applications, etc.

Dr. A. M. Cartledge read an essay on "Cicatricial Stricture of Pylorus; Pyleroplasty." See page (745).

DISCUSSION.

Dr. W. O. Roberts: I have under observation now a young woman, who, a week ago swallowed a pin. She has been complaining ever since of pain in the region of the pylorus, and there has been a doubt in my mind as to whether or not an operation would become necessary for its removal. There is considerable tenderness in this locality, but there has as yet been no fever, no vomiting and apparently no difficulty in the discharge of food from the stomach. I shall watch the case with great interest, and in the event operation becomes necessary shall adopt the method described by Dr. Cartledge.

Dr. W. L. Rodman: I have had no personal experience in cases of the character under discussion. I rather think, as Dr. Cartledge says, that possibly these pathological conditions are more common than is generally supposed. It is remarkable how pins and substances of like nature can be retained in the alimentary canal and tissues surrounding it, for so long a time. I remember, while serving as physician in the Kentucky Penitentiary, to have opened an abscess in the abdomen of a convict, and out of this abscess I removed three headless pins. The man had been a painter in Louisville, and had been in the Penitentiary for about twenty years. He told me that while following his vocation he was in the habit of taking pins with the heads cut off into his mouth and frequently swallowed them. As he had swallowed no pins since he had been in prison, it is evident that those taken from the abscess had been in the body for over twenty years.

Dr. J. A. Larrabee: While the subject of pins is under discussion, I would like to mention one case which may be of some interest. The patient, a child three and a-half years of age, complained of rectal trouble from which she could get no relief. An examination revealed a safety-pin pinned into the lining of the rectum. There was no history or knowledge on part of the child or mother of a pin having been swallowed and how it got there is a mystery.

Dr. L. S. McMurtry (Visiting): The case reported by Dr. Cartledge seems to me to be very unique. I think it demonstrates that surgery of the stomach is destined, in a very short time, to take a place with surgery of other parts of the alimentary canal that will make it thoroughly practicable. The trouble has been that operations of this class heretofore have been done only for malignant disease and in cases where the patient was in a dying condition, which is not a fair test for any operation; but it seems that this is the crucial test of nearly all new operative procedures, especially in abdominal work. I think the case Dr. Cartledge has reported, which resulted so happily, should encourage more frequent operative interference in troubles of this kind. Take for instance the case of Dr. Bernays, a celebrated case where a juggler was in the habit of performing the trick of almost swallowing a case-knife, allowing it to pass down the œsophagus. One evening it slipped from his fingers and passed into the stomach, and an operation was performed for its removal within a couple of hours. The stomach was opened and the knife taken out, the wound was carefully closed in about the manner Dr. Cartledge has described, and the man made an uninterrupted recovery. There we have something like a fair test of what can be done in skilled hands in opening the stomach. The case reported by Dr. Cartledge is just in the same line. The patient did not have malignant disease, but did have a disease which certainly justified heroic steps in order to bring about a cure.

There is only one point upon which I could criticise Dr. Cartledge's technique, and I do not know that I have the right to do that, but I think it would have been better done without gauze drainage. I believe that to have inserted a drainage-tube which could have been emptied every fifteen or twenty minutes and the tube removed at the end of twenty-four hours, would have been preferable. I do not think in any case where we want to drain away blood or mucus, that the gauze drain is advisable. If you will notice a capillary drain drains almost entirely serum. The lymph becomes entangled in its meshes very rapidly and makes it difficult to remove after twenty-four or forty-eight hours. When it is necessary to drain at all, it can be better accomplished by an open drain and suction than by gauze. I believe that the patient would have recovered without drainage, but in the choice of drain I would have been disposed to select a tube.

Dr. A. M. Cartledge: This operation, as I have said, originated with the two men, Heineke and Mikulicz, from the fact that Heineke described the operation, and, eleven months afterward, Mikulicz performed it with entire ignorance that it had been devised and described by Heineke. For this reason the operation was named after both gentlemen. They advise that the incision shall be through the pylorus, and then extend one inch up into the anterior wall of the stomach and one inch into the wall of the duodenum. In doing the operation it struck me that this was entirely too much, and I made up my mind that a shorter incision would probably answer. I do not believe my incision was over 1¼ to 1½ inches in length. The stricture was not very wide but it was very hard and thick. Another thing I discovered was the remarkable friability of the structures. They had to be handled with great care. After making an incision I passed my finger down to prove what the condition was partly, and found that the tissues were quite soft and with this slight traction were liable to be torn. Also it had to be sutured with the greatest care, and I was disappointed in regard to the ease with which the operation could be performed. I found that when put to the test of practice, suturing the duodenum is not very easy. I congratulate myself that this operation was performed and the patient off the table with all dressings applied, in fifty-nine minutes. However, this I believe to be a longer time than the operation should require. We had spent some time in examining the gall bladder, inspecting the fluid withdrawn, etc., and I think if I were to proceed directly with the operation it could be accomplished in from twenty-five to thirty minutes. The operator has to work through a small aperture in placing his sutures, and it is altogether a difficult procedure. I do not see any necessity for making the incision is most cases longer than 1½ inches. The operation has been performed but a few times in this country.

OPERATION FOR TUMOR OF PROSTATE GLAND.

(CONTINUED REPORT).

Dr. W. O. Roberts: Under the head of continued reports I desire to mention one case reported to this society some time ago. The patient was a man from whom I had removed a tumor of the prostate gland that obstructed the passage of urine. This man had not passed any urine voluntarily, for a year. I removed the tumor and soon after the patient went home. At the time I reported the case I had a letter from a son of the patient, who is a physician, stating that his father was able to pass water naturally. Within the last three weeks I have received another letter in which he says there is no trouble whatever in emptying the bladder, and the patient has made a good recovery.

CASE OF SIMPLE MENINGITIS.

Dr. J. A. Larrabee: I have recently had some cases that have been interesting to me. One in which I was especially interested, was a case of simple meningitis in a child about a year and three months old. The case was interesting because of the fact that we see so few cases of simple meningitis in comparison with those of tubercular origin. Simply meningitis is oftener in my judgment due to injury or to disease of the middle ear. Inquiry in regard to this case showed that three weeks previous to any symptoms the child had been thrown from a buggy, receiving a blow on the head. An examination showed that the skin was adherent to the pericranium at one point. At the time of injury the history of the case was that the child turned perfectly blue, then white, then vomited several times, but the next morning felt perfectly well and no other symptoms developed until the end of 2½ weeks at which time unmistakable symptoms of meningitis developed. To-night the child is out of danger, simply by rest and treatment with bromide and a little calomel. The length of time between the fall and development of the pathognomonic symptoms of inflammation of the meninges, seems a little singular.

HEMIPLIGIA FOLLOWING INJURY.

Another case I would like to report and have some light thrown on and where a gentleman was relieved of a very serious condition, is as follows: Patient a male, fifty-five or fifty-six years of age; a well-to-do, well kept man, in the upper walks of life, and one who has attended to himself properly; has never had an illness; is of considerable size; of the apoplectic build, without the florid countenance, however. Three nights ago this gentleman fell to the floor with paralysis, as was reported over the telephone.

I saw the patient immediately and found him hemiplegic; no sensation whatever; no response to a blow on the foot or a pin in the hand; good intelligence, however. From this state of affairs my prognosis was very serious, and I gave very little encouragement as to the outcome of the case, thinking, of course, that the condition then existing was going to remain. I administered ten grains of calomel and ten grains of jalap. This had a decided effect and I found the next morning that he had hyper-catharsis. I saw him at two o'clock that day, at which time he could move his foot in bed. I used a pin on his hand and found that he had a little sensation; he said he knew I was doing something to him. Yesterday morning he was able to move both his hand and foot; to-night he can move them more freely, but says he does not feel quite natural. Now the question is, what was it? It certainly could not have been infarction of the vessels, and I am rather puzzled.

NOTE—Subsequent to the meeting I learned that this patient had sustained an injury in climbing over a fence—a strain of both arm and leg—only two days before the paralysis.

REPORT OF A CASE.

DR. T. H. STUCKY: A child, twenty-three months old, under my care died about three weeks ago, and, from the symptoms present I could see no cause for death. I report the case to show how marked were the pathological changes compared with the symptoms during life. I was sent for one morning to see this child; the mother said that during the night the baby had commenced vomiting, and a little diarrhœa. The tongue was flabby; temperature 100° F. I gave ⅛ grain of calomel and one grain of lacto-peptine, every hour until the character of the stools changed. The next morning I found the temperature 101° F. I gave it one grain of tannate of quinine every three hours. That afternoon I found temperature 102.5°F. Treatment continued. On my visit the next morning I found that the temperature was about normal, there was apparently no abdominal tenderness, limbs not flexed and the child had every appearance of being on the high road to recovery. The next day about two o'clock, I found the child in collapse, temperature 104,° marked opisthotanos. It died in about sixteen hours.

I will quote the result of the autopsy as made by Dr. Louis Frank:

Body of male child, well nourished.

Head: Dura mater adherent to skull; at vertex these adhesions are so dense that it is impossible to separate the dura from the bone, the pia is slightly distended, a clear fluid escaping when pia is cut through Along the vertex there is some cloudiness; milky appearance along the larger vessels, and in this a few whitish tubercles are found scattered about near the fissure of Sylvius and at vertex. The layers in the Sylvian fissure are adherent. Lateral ventricles contain about ½ ounce fluid, clear. Ependyma somewhat cloudy.

Abdomen: Distended; on median section pus and fibrinous flakes appear. Cavity contains pus—about eight or ten ounces—which is mostly, however, in the pelvis. Intestines agglutinated but the coils can be separated. The vermiform is found passing down into the pelvis, and is held there by adhesions to the sigmoid and rectum. The sigmoid lies somewhat over it. After separating carefully the rather firm adhesions, the appendix is found to be about three inches long, with a mesentery to its proximal one-half. The appendix after ligation, is taken out and opened. It presents a small perforation at its extremity; contains no feces, seeds or other foreign body; is filled with a thick, mucous-like substance."

In connection with this report of the autopsy, I want to state that at no time during the child's sickness was there any abdominal distension; the bowel seemed to have been restored to its natural condition; there was no history of chill and no explanation of the cerebral condition. Careful inquiry reveals no history of tubercular trouble in the family on either side, and no history of specific trouble on the father's side; that the only injury the child had ever sustained was received about eight months before, when he fell out of a chair on to the top of his head. They did not call a physician as they thought he was all right. At nine o'clock in the morning, or three hours before I was called hurriedly by telephone, he was sitting on the floor playing with some blocks. I met his father that morning and asked how the little boy was and he replied that he was all right. That night he died. The case is of interest to me from the fact that the symptoms existing were out of all proportion to the revelations made at the autospy.

DISCUSSION.

Dr. J. A. Larrabee: The case is certainly one of interest, and one upon which little light can be thrown, especially as there is no history of either a specific or a tuberculous nature. If the injury had any thing to do with the adhesion of the dura mater and condition of the brain found, then according to all pathology the child should have had epilepsy or seizures of some kind. In regard to the pus found in the abdomen, while peritonitis is not often overlooked or mistaken in the adult, I have seen children with peritonitis—have had it occur in my practice, where symptoms were not present to such an extent as to attract attention, or sufficiently marked to be separable from ordinary colic or gastric attacks, and diseases of a milder character. But from fact that there was a perforated appendix, it would seem that in this case the mischief had been going on for a considerable time; this is also evident from the mal-position of the appendix and agglutination of the intestine. It is a very anomalous case.

PAPILLOMA OF LARYNX.

Dr. J. M. Ray: I have had under observation for several days a case of papilloma of the larynx. A woman thirty-eight years of age, consulted me for loss of voice and gave this history: Three years ago she suffered in a similar way, having a cough and loss of voice; she could make a tone loud enough to be heard, but it was only with an effort that she was able to do so. One day she was seized with a severe attack of coughing and spit up what on investigation proved to be a lump of flesh as large as a bean. Immediately she could talk with ease and had no further trouble until recently, when she began to get hoarse with considerable cough. This increased until she decided to consult a specialist.

When I saw her a week ago, she could talk in an ordinary tone but with a little huskiness. She said she could not call the children about the house and had not been able to do so for several weeks. Upon looking into her throat I found in the larynx, occuping the inter-arytenoid space, a papilloma about the size of a bean and with a broad base. I told her it would have to be removed. To-day I clipped off a piece, but did not succeed in removing all, as the throat was sensitive and I decided to make another attempt later. The interesting feature of the case is that the patient had the same trouble three years ago, the growth evidently becoming pedunculated, and in coughing it was broken loose and spit up. Cases of this kind occasionally occur in children, papilloma of the larynx become detached or disappear, but this is the first case I have ever seen in adult life.

CORRESPONDENCE.

CONSUMPTION OF THE LUNGS IS NOT TO BE COMPARED WITH LEPROSY.

EDITOR OF M. AND S. REPORTER.

Having devoted years to the study of the life history of germs found in tissues affected with Tuberculosis (consumption), and also having had practical experience with Leprosy, I take the liberty of offering a few words of consolation to those suffering with consumption of the lungs, who have been unduly alarmed by the words of enthusiasts who have, I have no doubt, unintentionally led the lay mind to class the contagiousness of consumption of the lungs with the popular impression of Leprosy; while it is largely based upon the horror with which the ancients looked upon the malady. Leprosy of the early ages was in all probability much more contagious under the habits of the patriarchs than it is with those living in the easy, comfortable and peaceful ways of Philadelphians.

From the facts, however, that Bates has found the bacilli of Leprosy on the hair follicles, and I in the spittle ejected from between the ulcerated lips of a leper while talking, and, also in uncountable numbers from the surface of the tongue of the same individual; while others have demonstrated their presence in the blood, we can readily understand why the people in the time of Moses were warned to burn the clothes of the leper, claiming that the garment worn by one was fretting leprosy and further that "the house shall be scraped off without around about, and they shall pour out the dust that they scrape off without the city, into an unclean place, etc." If the bacillus of Leprosy is the infecting cause, the contagion may be spread from more uncontrollable sources than is the poison of consumption of the lungs, viz: from the blood, the hair that falls out, the spittle from the mouth and from leprous tumors. These numerous sources make it next to impossible to live with a leper, without running a risk of becoming infected with the much dreaded malady, providing those exposed are predisposed to the contagion. The conditions, however, that render one susceptable are not understood by the medical profession. If the hairs from the body contain the poison of leprosy, isolation is almost necessary, and. in this country, but a few, yea, a very few families would be made unhappy by the enforcement of such a police regulation. As a matter of fact, the lepers I have talked with seemed to prefer to be alone; they seemed to appreciate their uncleanliness. There is, however, a very wide gap between coming in contact with the bacilli of consumption of the lungs and those of leprosy, under moderate care. This is on account of the number and character of the sources from which the bacilli leave the blood of a leper. The principal factor in conveying the bacilli of consumption of the lungs is the sputum, that unlike the hair of the leper can be caught and the bacilli therein absolutely destroyed.

Again, kissing by the consumptive can easily be avoided; the tooth brush can be cleansed by destroying the bacilli therein; the utensils used in eating can also be made clean, and so can the communion cup; otherwise, those predisposed to consumption of the lungs may fall victims to the poison from an infected person.

The Board of Health would certainly do well by protecting public places, while it is a grave matter to trespass upon the sacred privacy of nearly one seventh of our people—public officers should not be permitted to enter the homes of such a large proportion of our people. It would destroy their privacy and lessen their finer feelings of modesty. They must not be treated as cattle, but as refined human beings. Should a public inspector be privileged to enter the house of a consumptive it would not avail us much, for he certainly would not be permitted to rush into the private apartments of a lady without awaiting her convenience, and if he was required to await the convenience of the sick, those disposed to be criminally careless would certainly dispose of any trace of guilt before he entered the compartment.

Why is not the medical advisor as trustworthy as the inspector appointed by the Board of Health? If so, his opportunities for detecting hygienic neglect are much greater than those of the city officer appointed for that purpose. This being the case, one might believe it well to have a law providing for the enforceof regularly formulated sanitary precautions, upon the medical attendants reporting the neglect of any one suffering with consumption of the lungs or throat to carry out the rules of the Board of Health.

Not to be understood as opposing, in the least, the important object of the County Medical Society, I do wish to relieve the public mind of the impression that the loathsome condition called leprosy is like consumption of the lungs, in either cause or effect.

The leper is most often a great sufferer and a hideous object to behold, as well as being an almost useless member of society. The consumptive, on the other hand, up to the very advanced stage of the malady, is comparatively happy, and is, most certainly, a very useful member of society.

One of the true sayings of our illustrious Dr. S. Weir Mitchell is, that a person suffering with a disease below the diaphram never dies a heroic death. While this is very general in its application, those affected with consumption of the lungs are generally extremely happy, and are often very attractive in their personal appearance. They, as I have already said, comprise at least one-seventh of our population, the liberties of whom must not be trespassed upon one particle more than is absolutely necessary for the good of themselves and their fellow citizens.

Samuel G. Dixon, M. D.
The Academy of Natural Sciences of Philadelphia.

IRRIGATION OF BLADDER.

In preparing for irrigation of the bladder, the first step is to scald out a small pitcher. In this the antiseptic powder is dissolved in a few ounces of boiling water. While waiting for perfect solution, a pint and a half of boiling water should be poured into the fountain syringe and allowed to remain until the syringe is needed. The catheter, which has been kept in a bottle of 1:1000 bichloride solution, is removed to a small basin containing boiling water. The antiseptic solution can now be reduced in temperature by the addition of cool, sterilized water taken from the cotton-plugged bottle already mentioned. The prepared solution is now poured into the fountain syringe, all air is expelled, and the cut off screwed down. Meanwhile, the nurse has cleansed the external genitals of the patient with a 1:2000 bichloride solution. There remains only to pass the catheter and connect it with the tube of the syringe. Taking the catheter from the hot water with fingers disinfected in an antiseptic solution, bichloride glycerin is poured over two inches of the end as a lubricant, and the instrument, in a good light, is passed instantly into the bladder.

If the bladder is full, considerable urine must be allowed to escape to make room for the antiseptic solution. If there is little urine, there is danger in allowing it all to run out and permitting germ-laden air to be introduced through the catheter. The only convenient means of expelling the air from the catheter, when this instrument is first introduced into the bladder, is to allow a small stream of urine to pass outward through it. Before the catheter is connected with the syringe tube, all air must have been likewise expelled from the latter by allowing a column of the antiseptic solution to pass through. At first a gentle stream is turned on. The force is governed by the elevation of the reservoir and by the screw cut-off. The importance of injecting slowly can not be too strongly emphasized.

When the patient begins to feel a sense of slight distention the tube and catheter are disconnected. While the operator cuts off the stream from the syringe with his right fingers, with his left he guides the stream from the catheter into a quart bowl placed between the patient's legs. The operation of siphoning must not be carried to the extent of absolutely emptying the bladder. A little fluid should be left in to prevent the admission of air and to keep the bladder-walls from collapsing and causing spasm. It is best to leave at least an ounce of the antiseptic solution in the bladder after the last siphoning.—*M.B.*

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SATURDAY, NOVEMBER 11, 1893.

EDITORIAL.

IMMUNITY AND TETANUS.

There is, perhaps, no disease with which investigators have worked to obtain practical results in the way of treatment which has given quite as much satisfaction and encouragement so tetanus. The hoped-for results from tuberculin have not as yet been realized, and the prevention or cure of diphtheria by means of chemical substances isolated from cultures of the specific organism, or with the blood serum from animals rendered refractive to the disease, has not been satisfactorily demonstrated, although many promises have been given by preliminary observations.

With tetanus, however, the results are more encouraging. In a previous number of THE REPORTER were given the details in the successful treatment of a few cases of tetanus with the blood serum from immunized animals. The number of cases which, thus far, have been reported is about twenty—eleven of which recovered. In those that were not successful the disease ran a very rapid course and the treatment was not begun until the disease had become well advanced. The course of the disease lasted only from two to six days in the fatal cases. Even in those cases there was thought to be evident improvement upon the commencement of the treatment. As the fatality of tetanus is about eighty-five per cent., the conclusion which can be drawn from the cases reported is certainly very encouraging.

Two extremely interesting cases are given:

(1.) Taruffi reports (*Centralblatt f. Bacteriologie u. Parasitenkunde* 1892, p. 625) the following case: A peasant, aged seventy-four years, suffered a lacerated and contused wound of the little finger of the right hand. The wound was not dressed and suppuration followed. Ten days after the injury symptoms of tetanus developed. These increased in severity and two days later Tizzoni examined the case and injected twenty-five centimeters of antitoxin. This was followed by improvement and an increase in quantity of urine eliminated. The finger was amputated and virulent tetanus bacilli were cultivated from the wound. The tetanic symptoms gradually disappeared under the influence of repeated injections of antitoxin. On the eleventh day after beginning the injections, the patient was pronounced well. The total quantity of the antitoxin that was given was 150 grammes. It was further noticed that the urine was toxic before the treatment but not afterwards (third day), and blood serum from the patient did not induce tetanous symptoms in a rat, on the second day after treatment. These observations were considered as pointing to the neutralizing power on the part of the antitoxin and the toxin of the disease.

(2.) The second case reported by Casali (*Ibid*, 1892, p. 59), was a woman who injured her foot while working in a field. She paid little attention to it and on the following day was unable to walk. She consulted Casali who dressed the wound and ordered rest, which order was not obeyed. There followed, in a few days, swelling of the glands and suppuration of the wound with symptoms of septic infection. A few days later symptoms of tetanus appeared. The wound was examined bacteriologically and tetanus bacilli together with streptococci septicus were found. Antiseptic dressing of the wound was carried out and antitoxin treatment for tetanus begun. The tetanus symptoms disappeared after the sixth injection, but the septic trouble continued. Here there was a case of mixed infection, with a specific cure for one while the other remained unaffected by the treatment. This is especially interesting as it shows that the antotoxin could still produce its reaction even in the presence of the toxines that were produced in the blood by the septic infection.

In these cases we have a most admirable illustration of the "blood serum therapy," although others, not mentioned here, illustrate it even more fully. The accumulation of such a large number of cases with such favorable results, suggests the importance of having an institution for the treatment of tetanus, or at least for the purpose of preparing antitoxin, in America.

TRANSLATIONS.

SOME POINTS IN THE TREATMENT OF GASTRIC ULCERS.

The author, Dr. W. Fleiner, regards subnitrate of Bismuth as one of the best therapeutic agents given in large doses, and presents the indications for its use in the following manner: 10 to 20 parts bismuth subnitrate to 200 parts of water, in cases where simple washing with the stomach tube is not followed with the desired results, is given through the tube. It is generally useful in chronic cases of gastric ulcer, ulcerated carcinoma and hemorrhagic erosions, motor and secretory irritability. It is a specific agent in duodenal ulcers. These injections are first used daily, later every other day, and still later every third day until the case is cured.

After the use of 300 to 400 grms, no poisonous effects were observed. In cases where constipation appears enemas of oil were successfully used to combat it.

In the second group of cases bismuth was given in large doses 10, bismuth subnitrate, in a glass of lukewarm water to be stirred thoroughly and drank before breakfast. This was used in cases of gastric and duodenal ulcers in which the stomach tube was contraindicated. It was also useful in hemorrhages of the stomach.

Bismuth is contraindicated in cases where there is a decrease of acid secretions, the only exceptions being in hemorragic erosions and ulcerating tumors.—(*Müch. Med. Woch. 1893.*)

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*A lecture read before the Society of Wissenschaftliche Heil in Konigsburg i. Pr. Translated by M. B. Werner, M. D.

CLINICAL AND ETIOLOGICAL OBSERVATIONS OF PSORIASIS.*

The author, Dr. Nielsen, having studied 927 cases during 25 years at Prof. Haslund's Clinic, presents some points of interest. Localization: the palmer and planter surfaces are more frequently attacked than is generally supposed (19 per cent.); punctated affections of the nails (10 per cent.); the extremities come next in frequency.

As an average, an attack, under the treatment of large doses of iodide of potassium (50 gm. per day), lasted in 27 adults, 38.7 days; in 13 children 61.9 days. In cases in which arsenic was used internally with external medications, the attack lasted, as a rule, 52.3 days among nine children. It is probable that the arsenical treatment, given in increasing doses, will produce the same effect as the iodide of potassium.

The disease runs a thoroughly atypical course, lasting in some cases throughout life, having its remissions and exacerbations.

There were forty-nine cases in which remissions occurred at intervals of from 1 to five years; in ten, 5 to 10 years; in eight, 10 to 32 years. Generally the disease has no tendency to increase with the age of the patient, even though treatment be left out of the question. Chronic alcoholism or rheumatic joint affections frequently increase the severity of the attack, while intercurrent diseases accompanied by marked changes in nutrition, often act as a curative measure. Exacerbations frequently occur in the spring or fall. The disease occurs oftener in the male than in the female (3:1); is most frequently observed between the ages of 5 to 15, (in about 44 per cent); and after the age of fifty is found in about 2.7 per cent.

In 306 patients there was a distinct hereditary history; 29 per cent. showing that the disease existed in the immediate family; in 15 per cent. there was a history of a recent introduction. There is no etiological proof, however, that heredity should be considered of greater importance than contagion.

In isolated cases, psoriasis followed an attack of measles, scarlet and typhus fever, erysipelas and pleuritis, while in chronic affections (carcinoma, diabetes, etc.) it has often disappeared.

Patients suffering from other skin affections (prurigo, ichthyosis, eczema, etc.) are not exempt from psoriasis. Pregnancy in some instances has acted as a cure.

Statistics collected from the larger cities of Europe show that there was in 15,376 cases of skin affections 6.5 per cent. psoriasis, and in America 58,617 cases showed only a percentage of 3.28 (J. White). — *Schmidts Jahrb.* No. 8., 1893.

A CASE OF PSEUDO HERMAPHRODISM.*

From the patient, aged 21 years, in whom there had been a cessation of menses for 4 years, the author, H. Fehling, removed a myo-sarcoma of the left ovary, weighing 5 pounds. The following congenital deformities were observed by careful examination, external and internal, regarding sex. At the location where the clitoris should have been was an appendage, 5 cm. in length, with the thickness of a thumb, at its end resembling the head of a penis, with an illy defined prepuce; behind the base of this organ an opening was found which corresponded to the vagina in the female, 8 cm. in depth and with some traces of a hymen.

The left labium was poorly developed but normally formed; the right presented a rounded, sack-like appearance similar to the scrotum. A small oval, tender body was found in it. The operation revealed an infantile uterus. The right tube and ovary had descended through the inguinal canal into the right labia.—*Arch. J. Gyn.* xlii, -92.

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* Translated for **The Medical and Surgical Reporter** by Marie B. Werner, M. D.

INFANTILE ECLAMPSIA.

A child, aged 6 months, having a reducible inguinal hernia, was suddenly attacked by severe eclamptic convulsions. The author, G. Feurer, noticed that each attack preceded a bowel movement or an escape of flatus. The child died during one of these attacks. Autopsy disclosed that the vermiform appendix, 10 cm. in length, had slipped through the inguinal canal and was adherent to the testicle.

In a second case—a child aged five months, also having a reducible inguinal hernia,—suffering from eclamptic attacks, the author, profiting by the lesson of the first case, proceeded at once to perform a radical operation, with the most happy results. The patient made a rapid and good recovery, the eclamptic attacks ceasing immediately after the operation. The hernial sac contained the coecum and vermiform appendix, the latter being firmly attached to the walls of the sac.—*Corres. Bl. f. Schweizer Arzte 1893.*

ABSTRACTS.

THERAPEUTIC EFFECT OF HIGH ALTITUDE.

C. Theodore Williams, in a lecture delivered before the Royal College of Physicians, London, states that his studies of the effect of high altitudes on phthisis warranted the following conclusions:

1. Enlargement of the thorax takes place unless opposed by the growth of fibrosis; or by extensive pleuritic adhesions.

2. Males and females seem to do equally well, and profit most between the ages of twenty and thirty, males over thirty and females under twenty benefiting least.

3. The climate is specially beneficial in hemorrhagic cases and in hereditary cases, and appears in the latter class to exercise a distinctly counteracting influence on the development of phthisis.

4. It is most effective in cases of recent date, though of utility of those of long standing, and to insure its full benefit at least six months', and in many cases two years', stay is desirable.

5. With regard to the actual results of the climate, it undoubtedly produces great improvement in 75 per cent. of cases of phthisis generally, and in 43 per cent. it causes more or less complete arrest of the tubercular process.

Its beneficial influence is best shown on tuberculous consolidation, where improvement may be looked for in 87 per cent., and arrest in 57 per cent. Arrest takes place in 16 per cent. of the patients with excavations, and great improvement in 55 per cent. High altitudes also prove beneficial in:

1. Imperfect thoracic and pulmonary development.

2. Chronic pneumonia and bronchiectasis.

3. Chronic pleurisy, where the lung has not expanded after removal of the effusion.

4. Acute phthisis of all kinds, and especially where there is great irritability of the nervous system.

5. Phthisis with pyrexia, and in pyrexial cases generally.

6. Emphysema.

7. Chronic bronchitis and bronchiectasis.

8. Diseases of the heart and great vessels, except functional ones; diseases of the liver and kidneys, including all forms of albuminuria (Andrew Clark.)

9. Diseases of the brain and spinal cord, and conditions of hypersensibility of the nervous system.

10. Anemia.

11. In patients of advanced age or too feeble to take exercise.—*Brit. Med. Jour.*

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* Read before the Freie Vereinigung der Chirug., Berlin, 1893, and translated by M. B. Werner, M. D.

THE COUNTRY DOCTOR.

Prof. Wm. Keiller, in his address to the matriculants of the Texas Medical College, in Galveston, on the opening day of the present session, drew the following beautiful picture of the country doctor.

Prof. Keiller said: "Now in closing I wish to present to you a picture of the goal for which you are striving, a little glimpse of one of the noblest lives that men lead on earth.

"In the winter of 1890, there appeared in the Royal Academy Exhibition in London, a picture which attracted large crowds of warm admirers, and stirred many of them to their heart's core. Luke Fildes had been asked by a patron to paint a picture illustrative of English life, and he chose "The Doctor" as his subject, and painted to the life the ideal representative of the most humane of professions. No prosperous, wealthy specialist is this hero of the medical world. The first glance at the man reveals the general practitioner, the hard-worked country doctor. The only daughter of a humble farmer, a wee, curly-haired lassie of two or three, is sick, well nigh unto death. It is no long, wasting disorder—she is too plump for that; but the crisis of an acute malady. The next few hours will probably decide her fate. It is evening, and the doctor has seen her in the morning, and now, tired by a long round of visits, he has called again; and his energies, fatigued as he drove along in his buggy, are again called into full activity by the exigencies of the case before him. Poor wee pet! She is very low. Her pulse is rapid and feeble, her respiration quick and shallow; but, if her heart can be kept up a little longer, she may get a little sleep and ultimately pull through. Our doctor has with his own hands given her her medicine, and now sits watching its effect. Already she is soothed, her pulse is a little slower and firmer, her respiration less hurried, and she has dropped into a brief doze.

"And while she sleeps let us look at the doctor. He is the central figure of the painting, the center of interest even to the stricken father and mother, because in his hands is the life of their first-born. A man of strong and massive build, about forty, and therefore in the zenith of his mental vigor, with fifteen to twenty years' experience to mature his judgment; no dude, but well dressed as self-respect demands of all men of well balanced minds; the whole man reveals the well-to-do country practitioner. And his face? Genial, thoughtful, and above all things reliable and strong. There is no weakness there.

"It is late, and he is tired, but there is no languor in his attitude; he has forgotten all the world,—wife, children, the cosy supper waiting for him for an hour or more, the father and mother of the child, all are forgotten but the patient and his science. He is not absorbed over an interesting case which will be worth reporting at the local society; he is face to face with a problem of life and death. No debasing thought of a big fee (I am almost ashamed in the face of such a scene to mention the word)—I say, no thought of his fee mars the current of his calculations. No big fee can come out of that small cottage; but a little laughing face that was the sweetest sunbeam of the young couple's hearth may shine again or set to-night, and the doctor's skill may decide the matter.

"In the background the young mother, wearied with watching, has yielded her place to the man in whom, next to God, her trust is placed; and has laid her head upon the table, half in despair, half in unuttered prayer. Her husband stands beside her, his hand, with a subtle sympathy that she alone can fully understand, on his wife's shoulder; a touch that means hope for the best, sympathy and strength for the worst, his face expressive of the calmer way in which strong men meet life's worst vicissitudes.

"Gentlemen, it is well that in commencing a new course of life each man should have an ideal, and should keep his ideal ever before his mind. And I would hold up before you as a high ideal this picture of the country practitioner. Few of you will ever have the opportunity to become great specialists; but all of you may become most excellent men and good physicians, and lead lives which shall call down on your heads the blessings of a grateful people. The man whom our artist has chosen is a student every inch of him; a true man of science, but his science is a means to relieve suffering humanity. He is no money grabber; no dispenser of drugs at so much a bottle; no smooth, honey-tongued ladies' doctor with half hours to spare listening in scented, half-lit rooms and cushioned lounges to a languid account of imaginary ailments. He is no brilliant specialist, who has, by hard, up-hill work and much self-denial it may be, or by some lucky stroke of fortune, reached that pinnacle of success where life is easy, leisure frequent, successes brilliant, and fees often princely. He is strong; strong because of his knowledge, because of the hard, honest work of his student days, because though he may not have carried off honors he has determined to understand everything he has studied and make it his own; strong because since his college days he has remained always a zealous student; strong because it is his nature to be so. Such a physician must be reliable. His word must be slowly given, but when given as good as fulfilled; his word must be his bond; his tongue and his whole life must speak the truth. Our ideal physician must be benevolent—generous even to a fault, but just also. No warm-hearted waster of his goods and energies on all and sundry, but ready ever to err on the side of generosity and greatheartedness where there shall appear a fitting object for his compassion.

"He must be unselfish. No life grates more on the selfish than the physician's. He, more constantly than any other man, is called on to sacrifice self, health, wife and children, home comforts and home duties. It is not on the specialist that all this falls most heavily; it is on the general practitioner.

"In short, gentlemen, the life before you is one of labor from the beginning. If you wish to make fortunes do not study medicine. Patients you may have in plenty, and your pockets all the time be very empty, aye, even gratitude may be denied you. But you have chosen a profession than which none is more full of scientific interest, no study is more fascinating, no life gives more constant opportunity for the highest moral culture. And now and then you will get a handshake from a husband or father, a look from a wife or mother, that will make you feel that life is worth living after all, and you had rather be a doctor than anything else on earth."—*Texas Med. Jour.*

THE INFLUENCE OF TREATMENT OF A SYPHILITIC MOTHER, ESPECIALLY DURING PREGNANCY, UPON THE HEALTH OF THE INFANT.

Etienne (*Annales de Gyn.*, April, 1892; *Am. Journal of Obstet.*, February, 1893) draws the following conclusions from the study of thirty-two cases of pregnancy in syphilitic women:

1. The fœtal mortality, in cases in which the mother has never been treated, is enormous, reaching 95.5 per cent. If treatment be applied throughout pregnancy, we may hope to obtain almost complete immunity from this infant mortality.

2. Syphilis attacks the fœtus especially during the fifth, sixth and seventh months of intrauterine pregnancy.

3. Paternal syphilis is less injurious to the fœtus than maternal syphilis.

4. The prognosis differs according to the stage of pregnancy when the mother becomes contaminated.

(*a*) If infection occurs during the first three months and is not treated, the mortality during the first few days after delivery reaches one hundred per cent.

(*b*) The prognosis is a trifle better, if infection occurs during the fourth and fifth months.

(*c*) In one case of infection at the eighth month, the child lived and was apparently healthy; in a second similar case the child was in good condition at birth, but developed symptoms of syphilis later.

(*d*) Whenever suitable treatment was administered, the mortality was *nil.*

5. In no case was any unfavorable results met with from internal medication during pregnancy.—*Boston Med. and Surg. Jour.*

THE PATHOLOGY OF LAZINESS.

Many persons are unjustly compelled to bear the reproach of laziness, when their indisposition to exertion really has a physical basis, and depends much upon some grave disturbance of nutrition. Such cases deserve our sympathy, instead of the contempt which is unsparingly metted out to them by their more robust associates. Women, whose instincts are often remarkably correct, understand this, and when a child is unusually quiet and prefers to sit still, instead of joining its companions in play, the mother's fears are aroused; she thinks at once that something is wrong, and that the child is going to be sick, or is actually suffering from some obscure internal disorder, possibly hip-joint or spinal disease. This explanation may apply in adults as well as in children. Some years ago, a clergyman, who had been very active in church work, was noticed to gradually give up one duty after another, and to show marked disclination to perform any work requiring much exertion of body or mind. He was generally thought to be losing his interest and getting indolent. Indeed, he feared himself that this was the case, and it gave him much mental distress and spiritual disquietude. He afterwards came under the observation of a physician, who found that he was suffering from Bright's disease, from which he subsequently died. He was especially regretted by those who had hastily and ignorantly condemned him for what was assured to be a fault, but which, in reality, was due to grave disturbance of nutrition from the approaches of an insidious organic disease. Victims of chronic malarial poisoning afford typical illustrations of laziness, although clearly suffering with bodily disorder. Who can estimate the amount of physical disability and apparent indolence which is directly due to dyspepsia and chronic indigestion? Rheumatism and the muscular pains of lithæmia, locomotor ataxia, and its nerve-counterfeits, incipient brain disease, and arterial degeneration, are all potent factors in producing indolent habits of body, while phthisis, pernicious anæmia, and neurasthenia have physical weakness as a prominent and early symptom. A dislike for study in a child may often be traced to errors of refraction which are remediable by proper adjusted lenses.

Before pronouncing, therefore, a verdict of moral fault, and condemning those who are conspiciously deficient in energy, and whose powers of work are notably below the average, it would be well to stop and inquire whether they are not laboring under physical disability instead of indolence. In such cases it may be found that better results will be .obtained by placing them under the charge of a physician than under an instructor in morals. The decision between the hospital and work-house is often a difficult one to make for those wrecks of humanity, the physical degenerates, who become tramps because they have a moral and physical aversion to work. In a strictly analogous manner, in higher walks of life, when a physician prescribes physical exercise for patients who obviously require it, he often finds his instructions disobeyed simply because the physical disability of the patient is the real reason for his condition; for if he had the power to follow the prescription he would not need his advice. It appears, indeed, that, in certain instances, laziness may be a conservative effort of nature; and, as a symptom, will be estimated at its proper value by the intelligent physician.—*Food.*

A FOREIGN BODY IN THE EAR FOR THIRTY-NINE YEARS.—A correspondent of the *Medical News* reports the case of a patient who complained of occasional pain in the left ear since childhood. Hearing was almost lost and the canal was filled with a hard substance. With some difficulty a large white bean was removed, with the immediate return of hearing. On questioning the patient it appeared probable that the bean had been in the ear for thirty-nine years.

To Clean Stove Pipe of Soot.

This can be done without taking down the pipe and imperilling the combination. Take about two pounds of strip zinc, and when you have a large bed of coals put in your zinc and open the draught in the chimney—if this is done every three or four days the pipes will be effectually cleaned.

THE DISORDERS OF THE NERVOUS SYSTEM ASSOCIATED WITH THE CHANGE OF LIFE.

Dr. Gustavus Eliot in concluding this article offers the following propositions:

1. At the time of life when the menopause occurs the various organs of a woman's body are likely to be in a state of depression as regards either their nutrition or functional activity, so that the normal equilibrium of health action may be easily disturbed, and abnormal action, the manifestation of disordered function, may be inaugurated and perpetuated.

2. The cessation of menstruation is an event of great physiological importance, and is perfectly competent to produce grave disturbances of the nervous system, if any predisposition to them already exists.

3. The more common disorders of the nervous system occurring under these circumstances are functional in character, and are associated with disturbances of functions of other organs, and especially of the digestive, circulatory, and hematopoetic systems.

4. In their treatment, attention should first be paid to improving the general nutrition of all the tissues of the body, and restoring each organ to its normal activity.

5. If, after all other organs have resumed the proper performance of their functions, symptoms referable to a disordered condition of the nervous system still persist, recourse must be had to remedies which act directly upon the nervous system, either by improving its nutrition or by modifying and regulating its action.

REFORM FEATURES OF THE GOTHENBURG SYSTEM OF LIQUOR TRAFFIC.

One of the most interesting provisions of the by-laws is that the manager of a bar saloon must always keep on hand both cold and hot prepared food. He conducts the sale of viands as well as coffee, tea, cocoa, mineral waters and cigars on his own account, receiving whatever profits may be made from his transactions. It is expressly forbidden to sell intoxicating drinks to a person already under the influence of liquor, or to a minor.

The idea of the reform at the outset was to take care of the working people especially, so everything that has been done by the company has had this end principally in view. Four eating houses, where drams were sold only with food, were established. These places are well equipped with steam cooking apparatus, and aim to offset the attractions of drink by the presentation of cheap and well cooked food. An attempt was made by the company to compel on Friday evenings, when wages are always paid in Sweden, the purchase of a portion of food with every glass of liquor asked for. The workingmen, however, thought this to be too great an interference with their individual liberty, and the attempt was soon abandoned as a failure. The Gothenburg Company has also shown its regard for reform by the establishment of five reading rooms in which no intoxicating drinks are allowed to be sold. The annual cost of maintaining these institutions is something over three thousand dollars, and it is interesting to know that a record of attendance showed 217,207 visits to its reading rooms during the year ending September 20, 1892.

THREE CLASSES.—Charles Kingsley, writing to some young friends who were addicted to gambling says: "My dear boys, the human race may, for all practical purposes, be divided into three parts: (1) Honest men, who intend to do right, and do it; (2) knaves who intend to do wrong, and do it; (3) fools, who aim to do whichever is pleasanter. The latter class may be subdivided thus: (1) Black fools, who would rather do wrong, but dare not *unless with the crowd*; (2) white fools, who would rather do right, but lack courage *unless it is in the fashion*.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES

for October. Dr. William Osler contributes a paper on

Sporadic Cretinism in America.

The author states that there is no essential difference between those cases occurring in large numbers in goiterous districts and the sporadic cases. The term should be limited accurately to a form of idiocy associated with changes in or absence of the thyroid gland. The important factor is the loss of the function of the thyroid gland, whether this results from congenital defect, progressive atrophy, or coarse changes which gradually annul its function.

The author discusses congenital cretinism, and that developing in early childhood, as well as endemic and sporadic cretinism. The article deals with the subject most minutely, both in regard to the pathology of the disease and the historical literature on the subject. The interest in the subject is at present a very practical one, inasmuch as the observations on the beneficial effects of thyroid feeding have been shown in several cases, particularly in those seen within the first three or four years of life. The author has at present two cases under treatment, but both for such a short time that it is impossible to say as to the changes in the condition.

The paper also includes the report of a case of operative myxœdema following the removal of the thyroid in a patient eighteen years of age.

Dr. Francis H. Williams discusses

Diphtheria and Other Membraneous Affections of the Throat.

He emphasizes particularly the following points:

1. The necessity of cultures as a means of early diagnosis.
2. The coincidence of diphtheria and other diseases.
3. The bacteriological examination of all patients ill with scarlet fever, typhoid fever, measles or other disease, who have membranous throats.
4. The bacteriological examination of specimens from the throats of all diphtheria patients before isolation is ended.
5. Seven and one-half (known at present in the United States as fifteen) volume solutions of hydrogen peroxide are weak germicides.
6. The advantages of strong hydrogen peroxide solutions, locally, in diphtheria. The substitution of harmless and more efficient for harmful or inefficient local treatment.
7. The importance of frequent, early local applications.

Dr. W. T. Councilman contributes a paper on

The Pathology and Diagnosis of Diphtheria.

He regards only those pseudo-membranous inflammations as belonging to diphtheria in which the Klebs-Lœffler bacillus is found. When it is not present, no matter what the extent and the character of the local lesions, or the severity of the symptoms, the disease is not diphtheria. He also discusses the pseudo-membranous inflammations of the larynx accompanying typhoid fever, and thinks they are more common than is usually supposed but are generally overlooked owing to the hebetude of the patient preventing any of the symptoms of the throat affection from appearing. While it is not proven that these inflammations are due to the Klebs-Lœffler bacillus, yet there is one case in which it is positive that the organism was found. In his experience the membrane is more apt to be found at the beginning of the œsophagus on the posterior wall of the pharynx than in any other place. Diphtheria bacilli have been found by the author in one case of inflammation of the middle ear following diphtheria, and in two cases of inflammation of the middle ear following measles. In the two cases of measles there was no affection of the throat at the same time and the author is inclined to view the occurrence as one of accidental wound infection.

In regard to those cases reported in which the Klebs-Lœffler bacillus was said to be found without any pseudo-membranous deposit in the throat, the author is inclined to believe that the whole respiratory tract was not examined for lesions.

The author thinks there is no doubt that the danger in diphtheria lies chiefly in the absorption of the virus which is produced locally, and that this does not take place with anything like the same readiness in adults as in children. This is probably due to the more delicate tissues of the child, its greater vulnerability and possibly a greater facility of absorption. It is very probable, however, that just as there are different degrees of susceptibility of the mucous membrane to the local action of the bacilli, so there are also differences in susceptibility to this systemic poisoning.

The staining which he has found uniformly best suited to the detection of the bacillus is the Loeffler solution of methylene-blue, consisting of methylene-blue dissolved in a weak solution of caustic potash. He states as a general rule that the more abundant the various organisms which are found, the less likelihood of the case being one of diphtheria. In his examinations he relies chiefly on the methods of culture.

Dr. J. M. Bannister discusses "Rifle Practice in its Relations to Eye-Strain." The author finds that the present color of the target is productive of great eye-strain and suggests that the color be changed and the element of glare reduced to a minimum.

This can easily be effected by making the body of the target black and the bulls-eye and rings buff. He also suggests that, as some recumbent posture seems essential to good long-range shooting, the prone position be made the sole regulation recumbent position, and that the back and side postures be excluded.

Dr. Emil Mayer reports a case of "Congenital Strictures of the Oesophagus." In the treatment, an œsophageal bougie of full size, No. 18 of the English scale, was passed under ether into the stomach with immediate relief. Previously the child had been accustomed to eat and try to swallow as she lay on her back with her head far extended. The obstruction in this ease was, in all probability, due to a membranous band almost occluding the œsophagus in its lower portion. The child has been under observation for one year without any trouble.

Dr. James E. Newcomb contributes a paper on

The Occurrence of Hemorrhage After Operation for the Removal of Adenoid Tissues from the Naso-Pharangeal Vault,

reporting a fatal case. He thinks that patients from whom adenoid tissue is removed should be kept under careful observation for at least twenty-four hours. No single instrument is the ideal one for every case. Unless one single application of the curette will suffice to clean out the pharyngeal vault the writer inclines to the use of an anæsthetic. He prefers ether carried to the primary degree, and the forceps, either the Gradle instrument or a modification thereof, and supplemented frequently by the use of the curette and finger-nail.

Dr. Earnest E. Maddox reports "A Case of Poisoning by a Belladonna Plaster." The plaster in question was manufactured by a firm which prides itself on the excellency of its belladonna plasters, and which exhibits the results of tests to show how much more belladonna they contain than the officinal plasters. The case recorded shows that there is a limit to excellency of this kind, and that there is need of caution not to carry it too far.

The remaining paper is the report, by Dr. Walter Edmunds, of a case of "Complete Prolapse of the Rectum" in which, after the failure of other operative measures the prolapsed portion was amputated with excellent results.

INTERNATIONAL MEDICAL MAGAZINE

for October.

Professor Bouchard of Paris, has an interesting paper on

Albuminuria not of Renal Origin.

Among the diseases in which albuminuria is found, but where the albuminuria in question depends on a morbid state or functional trouble of other organs than the kidneys he mentions gout, diabetes and obesity. In gouty or diabetic cases the albuminuria does not dominate the first disease but associates itself with the malady and gets better as it does, and goes away entirely if the first does. He has seen it 26 times in 100 cases of obesity—58 times in 100 cases of gout and 33 times in 100 cases of diabetes. Another variety is dyspeptic albuminuria and more particularly that form accompanied by dilatation of the stomach.

The liver may elaborate certain substances of an albuminoid nature so that albuminuria will result, again we have a cutaneous albuminuria which is of a reflex order and is provoked by excitation of the cutaneous nerves, as after rubbing a person with turpentine, cutaneous faradization or by faradization of the sciatic nerve or again by opening the peritoneum.

An intermittent albuminuria is seen in adolescents or in children during the period of growth, and when this is going on poorly, owing to dyspeptic troubles.

The treatment should not be directed to the albuminuria but to the pathogenic condition that brings it about.

Dr. Edward F. Wells, Chicago, contributes a paper and cites cases. "Note on the Curved line of Dullness in Pleuritic Effusions." As a result of his observations he says the line of demarcation is never horizontal, but is invariably curved, with its highest point in the axilla; also that when the fluid portion of a fibrino-serous exudate has been absorbed and a large quantity of fibrinous material deposited in the bottom of the sac and become organized and attached to both layers of the pleura, the line of demarcation is still a curved one, highest in the sub-maxillary region, and higher in front than behind.

The Treatment of Posterior Urethritis by Irrigation, without the use of the Tube or Catheter,

by G. Frank Lydston. The author believes that posterior urethritis *per se* never gives rise to a visible discharge but that when this symptom is present it is because the anterior urethra is infected. The treatment must, therefore, restore the anterior urethra to a normal condition, and to do this he irrigates the urethra through a short nozzle so the fluid may baloon the urethra thoroughly. After the anterior urethra has been thoroughly washed the patient should try to urinate while a full stream of antiseptic fluid is ballooning the urethra, relaxation of the sphincter results and the fluid enters the deep urethra and bladder; this should be repeated until several quarts of fluid have been injected and ejected. For this irrigation he recommends a warm solution of boric acid with 10 grains of salicylic acid and an ounce of glycerine to the quart. This irrigation is followed by a pint of warm solution of nitrate of silver one-fourth to one grain to the ounce. This treatment is advocated only in chronic cases.

Dr. James M. Anders of Philadelphia, contributes a paper on

The Complicating Conditions, Associated Diseases and Mortality-rate in Erysipelas.

The author presents the following conclusions:

a. In typical cases erysipelas is a self-limited disease, the average duration in persons under forty years of age being fourteen days.

b. The course of the disease was greatly lengthened when complications were present or chronic affections pre-existed, as well as when occurring in persons over fifty years of age.

c. Certain chronic affections, notably pulmonary tuberculosis, chronic nephritis, chronic rheumatism and organic diseases of the heart, increase the susceptibility to the complaint,—having been present in 7.8 per cent. of the total number of cases.

d. The most common complications were abscesses and acute rheumatism; the rarest meningitis and ulcerative endocarditis, pericarditis not having furnished a single instance.

e. The general average mortality was 6.57 per cent., while in the cases from private practice it was 4.16 per cent.; in persons under forty years it was only 3.5 per cent., in those over seventy years 46 per cent., and in the traumatic cases 14.5 per cent.

f. The mortality-rate was augmented as much as 25 per cent. by the presence of co-existing chronic affections.

g. The numerous complications also increased the percentage of deaths, and certain of them in an especial degree, notably labor, pneumonia, acute nephritis, delirium tremens and active delirium.

h. Age has a decisive influence upon the mortality after the forty-fifth year, this effect becoming more pronounced after the sixtieth year.

Dr. A. D. Rockwell contributes a paper on

The Nervous Origin of Jaundice.

The author gives at length three cases in which profound jaundice was produced from nervous causes alone.

Jaundice may be caused " through the entrance of poisons into the blood, through a deficient supply of oxygen, as in some cases of pneumonia, or where persons are habitually confined in small and ill-ventilated habitations, or where there is obstinate constipation with excessive secretion of bile, and, finally, when the individual has been subjected to extreme nervous influences, such as fright or rage, and especially the depressing influences of great grief and anxiety, the proper oxidation of the bile-acids is interfered with, bile-pigment appears in the blood, and jaundice results "—The differential diagnosis between obstructive and non-obstructive jaundice is difficult.

Between lithæmia dependent upon nervous causes and neurasthemia the following differential points are given:

The mental phenomena are different, the neurasthenian is not the victim of such irritability and unreasonable outbursts of temper.

Lithæmia is usually accompanied by obstinate constipation and by very cold hands and feet.

The tongue of lithæmia is coated more frequently and to a greater extent, and the pulse is slow rather than fast.

In neurasthenia the oxalates are frequently found in abundance, while in lithæmia the lithates are often freely deposited.

Some Simple Methods for the Analysis of the Gastric Contents,

by H. Lockhart Gillespie, Edinburg.

The author gives as routine practice to

1. Note the color, odor and character of the fluid obtained, with the time after food, the nature of that food, and whether any water had to be added before the stomach tube would act.
2. Filter some of the contents.
3. Determine the total acidity.
4. Test for the presence of free acid.
5. If free acid be present, find out if it is HCl.
6. Test for the organic acids.
7. Determine the presence of pepsin.
8. Investigate the nature of the proteids.
9. Test for alcohol, sugar, starch, blood or abnormal substances.

The writer considers carefully each and especially the fourth and fifth in which he considers the phloraglucin-vanillin test the most delicate and best. It is composed of phloroglucin two, vanillin one and absolute alcohol thirty parts. On drying some of the gastric contents with a drop or two of the reagent a bright red color is produced.

The remaining papers in the Journal are " An Epidemic of Diphtheria in Hightstown, New Jersey, in July, 1893, supposed to have been caused by Infected Milk " by Dr. G. H. Franklin; also "a case of Fracture of the Pelvis " by Dr. C. E. Perkins, and Clinical Lectures by Dr. W. R. Gowers on Syphilitic Hemiplegia in which he has treated the subject very thoroughly. One by Prof. Potain of Paris on The Diagnosis and Treatment of Gastric Ulcer, and a lecture on Hemiplegia; Obscure Brain Lesion; Cerebral Inanition by Dr. D. R. Brower.

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

THERAPEUTICS.

Eucalyptus Oil.

We recently noticed a case in which the oil obtained from the *Eucalyptus globulus* had been used successfully in the treatment of puerperal fever. The dose was three minims. The *Australasian Medical Gazett* reports a case of fatal poisoning with this drug, which occured in New Norfolk, Tasmania. Dr. Andrew Neale states that "a little over half an ounce " was taken by a boy of ten. He was in perfect health, but, the rest of the family having colds, he swallowed the oil as a preventive, recalling the well-known epitaph, "I was well. I would be better. Here I lie." He died in 15 hours. Other cases are mentioned in which "serious symptoms" followed doses of one drachm; but this appears to be the only clearly fatal case on record. The oil appears to be a favorite domestic remedy in those parts.—*Dublin Med. Jour.*

Tin-Poisoning.

Dr. W. A. Campbell reports six cases of gastro-intestinal disorder occuring in one family in a period of twelve days, one being fatal. The character of the alvine dejection suggested that the trouble was dysenteric. Investigation showed that the source of poisoning was the eating of tomatoes which had been preserved in cans which formerly contained peaches. These cans, having been ineffectually sealed with wax, had been reheated and resealed. A chemical examination of the contents of a can revealed a comparatively large amount of lead. He concludes:

1. Stannous salts are poisonous to the human system, being similar in their action to the other mineral poisons—lead, zinc, arsenic, antimony.*
2. The salts of tin are anthelmintic as well as the powdered product.
3. Toxic doses of the salts produced symptoms similar to those from ptomaines.
4. Canned-food products may contain stannous salts in poisonous quantities.
5. The danger from this source is increased from exposure to the air; hence, all fruits should be emptied from tin cans as soon as opened. The treatment pursued in these several cases was entirely symptomatic—astringent, demulcent, anodyne, or stimulant, as the symptoms indicated. The diet was milk.—*Therapeutic Gaz.*

Death From Salol.

At a meeting of the Biological Society of Paris, held the 27th May, M. Girode exhibited two lumps of salol weighing 1.55 grammes and 1.25 grammes, which had remained undissolved in the stomach of a woman for twelve months.

The woman died on the 20th April in the Beaujon Hospital, and when the autopsy was being made the injected condition of the great curvature of the stomach attracted attention, and when the viscus was opened the two masses of salol were found (*L' Union Medicale,* No. 64).

MEDICINE.

Transmission of Tuberculosis to Fœtus.

Dr. Keating says:

Unrecognized genital tuberculosis in women without pulmonary disease is not uncommon.

A tuberculous mother can transmit the disease to her offspring *in utero.*

Tuberculosis is apparently at times confined to the generative organs of women, probably with greater frequency than we now recognize.

Bacilli or their spores can be conveyed by means of seminal secretion to women when no apparent tubercular lesion is present in the male generative organs.

Women may, and often do, escape tuberculosis when transmitted in this way, and even when evidence exists of tuberculosis of of the male generative organs.

Is it not possible for the father to transmit his disease directly to the fœtus, the mother not proving a fertile soil? And, if so, is it not possible for this inheritance to become latent in the child only to manifest itself when accident or environment tends to bring it into activity? And can we not go still further and assert that the bacillus or its spores, inherited from either parent, may be carried into another generation and become manifest in glandular affections, joint troubles, or even finally in pulmonary disease?

Authorities agree that fully 50 per cent. of phthisis cases show the taint in their family record, and though the contagionist would wish us to believe that the *susceptibility* only is inherited, we feel convinced that the majority of practitioners will agree that tuberculosis, like syphilis, often gets more than susceptibility from its progenitors.—*Arch. of Pediatrix.*

Cocaine and the Milk Secretion.

Guenel (*Gaz. Med. de Nantes,* February 12th) reports the following observation. In treating a case of cracked nipple with a 1 in 50 solution of hydrochlorate of cocaine, he found that the secretion of milk was stopped by the application. The breasts became flacid, and the nipples lost their erectility. The functional activity of the breast was restored on discontinuing the use of cocaine. —*Brit. Med. Jour.*

Suckling and Quinine.

Oui (*Arch. de Tocologie et de Gynec.*) finds that when the mother or nurse takes quinine it has no ill effect on the child. The drug is certainly excreted with the milk, but in very small quantities. The quininized milk has absolutely no influence on the child. After a series of careful weighing and measurement, it was found that the average was the same in children suckled for a given time by nurses who had taken quinine as in children whose nurses had not taken that drug. Hence a nurse or mother may safely take quinine. Burdel's theory that quinine is noxious to the child is incorrect, aud the precautions which he recommends are therefore unnecessary.—*Ex.*

A New Method for the Radical Cure of Varicose Veins.

Recognizing the deficiencies of these modes of treatment, we proceeded to treat the condition in a manner that would remedy it at once. The two great channels that drain the superficial venous circulation of the leg are the internal or long saphena and external or short saphena veins. These and their tributaries are the vessels affected in the varicose condition. The lack of support, or any other cause, act simultaneously upon every branch of the vein. The long saphena vein commences in a minute plexus on the dorsum of the foot; it ascends in front of the inner ankle and inner side of the leg, behind the inner margin of the tibia. It drains all the anterior surface of the leg and the whole circumference of the thigh.

The external or short saphenous vein drains the posterior portion of the leg and empties into the popliteal vein between the two heads of the gastrocnemius muscle. This being the case, it occurred to me that if obliteration of the varicose veins was the essential factor in the cure, it might be possible to obliterate all the surface venous circulation by ligating the long saphenous vein at the saphenous opening and the short saphenous vein between the heads of the gastrocnemius. Blood stasis must necessarily follow and a certain amount of œdema. Elevation of the limb, and gentle compression with raw cotton and a flannel bandage soon overcomes this. Rest in bed adds the final requirement to what seemed to me *a priori* the ideal mode of obtaining a wholesale obliteration of all the varicose veins of a limb, hence the cure.

The advantages claimed for this method therefore are, first, it deals with the cases of varicose veins at wholesale; second, the operation, if *aseptic*, is harmless, easy and with the help of cocaine painless; third, it achieves that principle which we know underlies the cure of all aneurismal or varicose conditions, viz., an ultimate obliteration of the impaired blood vessel. This is reached by coagulation of blood and gradual absorption of the coagulum, while sufficient white blood corpuscles have exuded during the period of distension to subsequently build fibrous tissue which will contract upon the obliterated vein; fourth, until now we are not aware of any relapse; fifth, a cure seems apparent in from two to three weeks.—Laplace, in *Jour. Am. Med. Association.*

Tracheotomy for Wasp-sting.

A curious case has been reported from Huntingdonshire. A farmer inadvertently swallowed a wasp while drinking a glass of ale. His throat began to swell immediately, and a tracheotomy had to be performed soon afterwards in order to avert suffocation. The patient was saved with difficulty.—*Med. Press and Circular.*

The Early Management of Clubfoot.

Dr. De Forest Willard, in a clinical lecture of this subject offers the following conclusions:

1. The first month of life is the period of greatest growth, and to neglect treatment of club-foot during this time is to permit the bony and soft tissues to become permanently misshapen.
2. Rectification should be commenced from birth by various simple measures.
3. Correction can be accomplished by a variety of dressings.
4. Manipulation is exceedingly important for the production of a flexible foot.
5. Apparatus should be applied as soon as the foot and leg are in position for its application.
6. Rectification and manipulation should be continued up to the age when the infant is ready to walk, at which time, if the foot cannot be placed upon the sole firmly, operative measures should be instituted.—*Therap. Gazette.*

Treatment of Acute Rheumatism.

℞ Salicylic Acid,
Lanolin,
Ess. Turpentine, } aa..............ʒijss.
Azunge,......... ....ʒijss.

Applied to the articulations, this ointment possesses many advantages. In the first place, it suppresses the pain in the space of a few hours; by it the swelling of the joint diminishes on the second day, and the fever fall completely between the third and the fifth day. Besides, *internal treatment is unnecessary*, which is of great importance, as every one knows what repugnance patients have to salicylate of soda; and, finally, it is economical.—*Med Press.*

Appendicitis.

Dr. Sanborn in his paper read before the *New Hampshire Medical Society June, 1893*, concludes as follows:

(1) That in all cases the physician is concerned only in the early recognition of the disease, the subsequent treatment to be left to the surgeon.

(2) That the catarrhal or mild form of appendicitis may be considered the only, medical form of the disease; and delay in operating may be encouraged to a reasonable extent.

(3) All cases of appendicitis which, at the end of thirty-six hours from the beginning of the attack, show signs of increasing disease should be operated on.

(4) That the majority of so-called recoveries, treated medically, are not recoveries in the full sense of the word, but simply a respite which enables one to settle worldly affairs, and take out a life-insurance policy, in anticipation of a fatal termination.

(5) The early surgical treatment of appendicitis enables us to avoid in every case uncertain results of a spontaneous cure, the danger of recurrent attacks, and the often fatal general peritonitis in apparently mild cases.

SURGERY.

The Care of Catheters.

Gouley gives the following directions for the care of catheters. Web catheters should be kept at full length to prevent cracking. In cold weather they should be warmed slightly before shaped for use. In spite of good care web catheters are liable to harden in a few years, especially if not in constant use; they then lose their shape even if they do not crack, and should be discarded. After use they should be carefully dried inside as well as out, and kept wrapped in *dry* antiseptic gauze in metal cases. Soft-rubber catheters should be kept at full length in *moist* antiseptic gauze, away from the air, as exposure causes it to become day and brittle. The life of a soft-rubber catheter is short at best, but when in daily use and anointed with fatty lubricants, they swell and become soft and useless in a few weeks. Where continued daily catheterization is necessary, it is best for the patient to have a set of ten or twelve catheters, and to use two each day, so that the same catheter may be carefully dried and sterilized, and use only every fifth or sixth day. Both web and rubber catheters are much injured by fatty substances, and even by vaselin, though to a less degree. The lubricant should be unirritating to the urethra and contain no fat or free alkali to deteriorate the varnish of web catheters or to soften the rubber catheters. The following formula has been found satisfactory: Three hundred and sixty grains of white castile soap, powdered, are added to two fluid ounces of boiling water and stirred until a homogeneous jelly is formed. Enough hot water is then added to bring the whole up to 1,200 grains, after which the mixture is strained through cotton gauze and one-half a fluid-ounce of tincture of quillaja poured into it. This mixture when cool has the consistency of honey. A little carbolic acid may be added and the lubricant kept in collapsible tubes.—*N. Y. Med. Jour.*

Craniectomy in Idiots.

M. Bourneville, in a recent long and careful paper, has brought before the French Academy of Medicine the sum total of the results of craniectomy in deficient or idiot children. The first surgeon who attempted such an operation with a view to giving the brain more room for expansion was Dr. Fuller, of Montreal, in 1878. The child was an idiot, aged 2; the result was some improvement after a temporary paralysis. The second case was operated on by Lane in 1888, in America, and died after fourteen hours. Then, in 1890, Lannelongue took the matter up in Paris, and operated in rapid succession on twenty-five microcephalic idiots. Only one of these died from the immediate effect of the operation. Since then there have been in all fifty-six operations at the hands of Horsley, John Barlow, Keen, Bockel, Pean, and many others, which have brought about thirteen deaths. Among the forty-three children who recovered from these operations some improvement, generally very slight, is claimed in twenty-four cases. Hardly sufficient time, however, has passed since these eighty-one operations during the last three years to allow us to judge adequately of the results. The particular point to which M. Bourneville is addressing himself is the question whether in the microcephalic type of idiots the smallness of the brain is caused by the pressure due to the premature closure of the fontanelles and ossification of the sutures, for it is against such pressure that the craniectomy has been directed. There is a collection at the Bicetre of 350 skulls, most of them of idiots, and a few of them of microcephalic idiots who have been operated upon. The microcephalic idiots in general, and these cases of craniectomy in particular, do not show any signs of premature ossification. The operative openings also would not have given any considerable opportunity for the expansion of the brain, if it had had any capacity to grow further. In fact, it remains true, in M. Bourneville's opinion, not that the skull cramps the brain, but that the brain moulds the skull. (*Le Proges Med.*) —*The Practitioner.*

Abortive Treatment of Gonorrhœa.

To abort gonorrhœa, Dr. Jamin washes out the anterior portion of the urethra several times daily for about four days with a solution of potassium permanganate of the strength of 1-4 : 1000 of water.—(*Merck's Bulletin*). The first three washes are made at intervals of about five hours; the subsequent ones, only every twelve hours. After the first injection, it is claimed, there are no more gonococci in the urethral discharge; the other washes are intended to destroy the latent germs in the urethra.

The injections of potassium permanganate, when made according to Pezzer's method, are reported to succeed very well. The liquid is injected through a red rubber catheter with thin walls and lateral perforations throughout, through which the injected fluid emerges and thus bathes the mucous surface of the urethral canal maintained dilated.—*Col. and Clin. Rec.*

Abortive Treatment of Buboes.

It is well known that Welander, of Stockholm, has proposed to abort buboes by injecting into the beginning bubo and into the tissues about it a solution of benozate of mercury, in strength of one to one hundred. He injected a cubic centimeter of this solution, and then applied a compressing dressing. The first day the patient experienced quite lively pain; the succeeding days the injected parts became swollen and then diminished in volume, and resolution took place after a period of three weeks. Drs. Brousse and Bothezat, of Montepellier, have again taken up these experiments, but they have thought it useful, in order to well appreciate the value of this method, to pick out cases in which the pain, the inflammation and the size of the gland affected prove that there is danger.

of suppuration. On the other hand, they have not experimented with patients in whom suppuration had already begun.

They have thus only been able to collect ten cases, but all picked ones, and hence not possessing a great value from the point of view of exact appreciation of the efficacy of the method. They employed the solution recommended by Welander (benzoate of mercury 1 grain, chloride of sodium 30 centigrams, distilled water 100 grains). After rendering the region aseptic (shaving, washing with soap, ether and sublimate solution), as well as the instruments and hands, they injected half a syringeful of the solution into each extremity of the gland. They then applied a sublimate compress and a compressing bandage either with cotton or with a caoutchouc band, but of the cases thus treated they had only one successful result. In all the others the evolution into suppuration continued, and they were obliged to incise. Only one case became chancroidal; the other buboes were not virulent, and hence should have been favorably influenced by the method. In all their patients the injections were followed by a state of malaise very pronounced, cephalalgia, nausea, depression and raised temperature. The authors, therefore, do not believe in the efficacy of the procedure called by the name of Welander.—*Jour. Cut. and Gentie-Uriunary Dis.*

The Forms of Diabetes.

Dr. George Harley gives the following classification of diabetes :

1. Hepatic diabetes—including the gouty variety.
2. Cerebral diabetes—including all cases of saccharine urine arising from nerve derangements.
3. Pancreatic diabetes—the most deadly form of the disease.
4. Hereditary diabetes—a form by no means uncommon, and one, too, where both brothers and sisters may labor under the disease without either their maternal or paternal parent having been affected by diabetes, though more distant members of the family may have suffered from it.
5. Food diabetes—including all forms of saccharine urine arising from the ingestion of unwholesome substance.

In the matter of treatment, besides diet and opium or codeine, Dr. Harley recommends oroton chloral, strychnine, phosphoric acid for thirst, and an absolute prohibition of alcohol.—*Medical Record.*

Enucleation of the Eye

Dr. Jackson, in *Philadelphia Polyclinic*, says:

To summarize, the indications for enucleation are:

1. The presence in the eye of a malignant new growth, as glioma, sarcoma, or tuburculosis. This indication is imperative no matter how much vision the eye retains.
2. The presence in the eye of a foreign body, with iridocyclitis. If the injury be recent and the inflammatory process still active, and the patient can not remain under observation, an eye with anything less than thoroughly useful vision should be sacrificed.
3. The presence of a foreign body in a blind eye.
4. Blindness with diminished tension of the eye-ball, following perforation either by traumatism or corneal ulcer, most urgent after traumatic perforation of the exposed portion of the sclera.
5. Blindness the result of irido chloroiditis without perforation of the eye-ball, if the patient cannot remain under observation.
6. Sympathetic inflammation, providing the exciting eye does not possess vision sufficiently good to be weighed against the chances of the sympathizing eye.
7. The actual presence of sympathetic irritation; not the risk of it, unless the patient is likely to be out of reach of surgical aid.
8. Persistent pain in a blind eye, sufficient to annoy its possessor or tempt him to the use of analgesic drugs.
9. Serious disfigurement of a blind eye, even if free from pain or risk of causing sympathetic disease.

Salicylic Acid as a Tænifuge.

Dr. Ozegovski (*Muenchener med. Wochenschrift*) has spoken highly of salicylic acid in the treatment of tape worm. He administers it as follows: The patient takes no dinner nor supper, and in the evening an ounce of castor oil. The following morning a second dose of one-half ounce of castor oil is taken, and an hour after a gramme (15 grs.) of salicylic acid every hour until four doses have been ingested. If the worm is not expelled after the fourth dose of the acid, a third dose of oil of one-half ounce is prescribed.

The Role of the Posterior Urethra in Chronic Urethritis.

Dr. Bransford Lewis, of St. Louis, in a paper read before the Association of Genito-Urinary Surgeons held in Harrogate, on the above subject, arrives at the following conclusions:

(1) The causes usually given for the prolongation of cases of clap (the presence or absence of gonococci; strictures of large calibre; the use of certain drugs in treatment, etc.) do not satisfactorily explain them, nor do they furnish reliable means for prognosticating the outcome of a case.

(2) A single widely-prevalent cause for such prolongation of gonorrhœa has as yet not proved its right to recognition as such.

(3) Posterior urethritis, by reason of its anatomical seclusion and inaccessibility to ordinarily prescribed treatment, if frequent, offers the best explanation for such prolongation or repeated recurrence.

(4) Scrutizing clinical investigation shows posterior urethritis to be present in the great majority of prolonged or severe gonorrhœa; and

(5) Direct topical treatment to the posterior urethra is therefore necessary in the great majority of cases.

(6) The causes usually given as productive of posterior urethritis are not commonly found to be real factors in the clinic.

(7) The mode of onset usually described does not coincide with that described in clinical observation.

(8) These two latter observations confirm the probability that posterior urethral infection is accomplished through the lymphatics, which explains the frequency of such infection.

(9) Posterior urethritis is not a complication, but a natural phenomen of gonorrhœa. —*Jour. of Cutan. and Genito-Urin. Dis.*

Horse-Hair in Minor Surgery.

Dr. Thompson offers the following summary of the advantages of horse-hair in surgery:

(1) Easily obtained and inexpensive.

(2) Soft, pliable, elastic and holds a knot well.

(3) Aseptic, non-absorbent and non-irritating.

(4) Can be used with a very small needle, and makes no shoulder at the eye.

(5) More easily removed than any other suture, without pain or injury to the tissues.

(6) Can be used for drainage.

ARMY AND NAVY.

U. S. ARMY, FROM OCTOBER 8, 1893, TO OCTOBER 14, 1893.

Leave of absence for one month to take effect about the 20th instant is granted First Lieutenant Merritte W. Ireland. Assistant Surgeon, Fort Apache, Arizona Territory.

Leave of absence for one month, to take effect on or about October 15, 1893, is granted Captain George McCreery, Assistant Surgeon, U. S. Army, Fort Sidney, Nebraska.

First Lieutenant Allen M. Smith, Assistant Surgeon will proceed without delay to Fort Missoula, Mont., and report to the, commanding officer of that post for temporary duty, to enable Capt. William D. Crosby, Assistant Surgeon, to take advantage of the leave of absence granted him.

First Lieutenant George D. DeShon, Assistant Surgeon, is relieved from further duty pertaining to the Medical section of the War Department Exhibit, World's Columbian Exposition, Chicago, Illinois, and will return to his proper station, Fort D. A. Russell, Wyoming.

Lieutenant Colonel Albert Hartsuff, Deputy Surgeon General, is relieved from duty at Fort Omaha, Nebraska, and ordered to report in person to the commanding General Department of California, for duty as Medical Director of that Department to relieve Colonel Joseph R. Smith, Assistant Surgeon General.

Colonel Smith, on being relieved by Lieutenant Colonel Hartsuff will proceed to Governor's Island, N. Y. and report in person on December 4, to the Commanding General Department of the East, for duty as Med. Dir. of that Dept.

First Lieutenant A. N. Stark, Assistant Surgeon now at Fort Clark, Texas, will proceed at once to Fort McIntosh, Texas, and report to the commanding officer, for temporary duty with troops in the field at Carrizo, Texas.

First Lieutenant Robert S. Woodson, Assistant Surgeon, U. S. Army, now temporarily at Fort McPherson, Georgia, will return to his proper station, Fort Barrancas, Florida.

Major John O'Skinner, Surgeon U. S. Army, having been found incapacitated for active service on account of disability incident to the service, is by direction of the President, retired from active Service this date, October 26, 1893, under the provisons of section 1251 Revised Statutes.

U. S. MARINE HOSPITAL SERVICE FOR THE FIVE WEEKS ENDED OCTOBER 16, 1893.

Fessenden, C. D., surgeon, granted leave of absence for thirty days, October 5, 1893.

Bailhache, P. H., surgeon, detailed as delegate to meeting American Public Health Association, October 5, 1893.

Vansant, John, surgeon, granted leave of absence for thirty days, September 23, 1893.

Hutton, H. H., surgeon, detailed as chairman Board to inspect Gulf Quarantine Station, October 17, 1893.

Hamilton, J. B., surgeon, granted leave of absence for three days, October 2, 1893.

Gassaway, J. M., surgeon, detailed as member board to inspect Gulf Quarantine Station, October 17, 1893.

Mead, F. W., surgeon, to rejoin station (Washington, D. C.) September 19, 1893.

Carter, H. R., surgeon to proceed to Way Cross, Ga., for temporary duty, October 4, 1893.

Kalloch, P. C., Passed Assistant surgeon, granted leave of absence for twenty days, October 9, 1893.

Brooks, S. D., Passed Assistant surgeon, to proceed to Chicago, Ill., for temporary duty, September 19, 1893.

Goodwin, A. T., Passed Assistant surgeon, granted leave of absence for thirty days, September 27, 1893.

Cobb, J. O, Passed Assistant surgeon, granted leave of absence for thirty days, October 11, 1893.

Guiterns, G. M., Passed Assistant surgeon, detailed as Recorder board, to inspect Gulf Quarantine Station, October 17, 1893.

Wertenbaker, C. P., Passed Assistant surgeon, granted leave of absence for seven days, September 26, 1893.

Perry, J. C., Passed Assistant surgeon, granted leave of absence for seven days, October 5, 1893.

Gardner, C. H., Assistant surgeon, to proceed to Port Townsend, Wash., for temporary duty, October 7, 1893.

Nydegger, J. A., Assistant surgeon, to proceed to Way Cross, Ga., for temporary duty, October 7, 1893.

Norman, Seaton, Assistant surgeon, granted leave of absence for four days, October 4, 1893.

Sprague, E. K., Assistant surgeon, granted leave of absence for three days, October 7, 1893.

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ORIGINAL ARTICLES.

THE MORBID ANATOMY OF TRAUMATIC ANCHYLOSES.*

THOMAS H. MANLEY, M. D.,† NEW YORK.

An acquaintance with the gross structural changes which attend or follow all severe injuries of the articulations, aids in opening the way to their safe and judicious treatment; beside it very materially enables us to make a forecast as to ultimate results.

In the recent past, the study of joint lesions of a pathological order, has been greatly elucidated, yet, the interpretations of bio-histological researches, are very far from being in accord.

Therefore as no final conclusions have been reached, our therapy in certain arthropathies, must for a time, at least in occasional cases be based on empirical lines.

The pathological changes in, or about a joint will be of a quality, and in proportion to the disorganization of anatomical parts in an anchylosis following an injury.

INTRA-ARTICULAR TYPE.

Rigidity of a joint following a traumatism, when the causation is dependent on intrinsic lesions, which are

1. Laceration, puncture, contusion or overstrain of the capsular ligaments.
2. Hemorrhage.
3. Fracture or dislocation of bone.
4. Inflammation, effusion, fibrous or osseous amalgamation of the articular surfaces.

Laceration, puncture, contusion or overstrain of a joint, is commonly, promptly followed by spasm of all the muscles above the seat of injury. Its degree is not uniform and it always is in excess, in the flexor group.

This action of the muscles serves a most salutary purpose in fixing the ends of the bones, and placing them in such a state of physiological rest as will most speedily favor functional restoration.

If the injury is not so great as to seriously involve the joint elements, but moderate reaction will follow; no febrile disturbance succeeds and by judicious treatment, in the absence of sepsis, the rigid muscles yield, when motion is again established, though a sense of weakness remains for a few days.

Certainly in those trivial phases of limitation of joint-action, as in all others, recovery will not only depend on appropriate treatment, but also on the neurotic, physical state of the patient, age, etc.

There are, however, occasionally witnessed very grave cases of joint lesion and anchylosis follow a severe contusion, torsion or sudden forced motion out of the normal range of action.

In many of this class few or no visible structural changes are apparent in the joint or overlying tissues. Yet the parts remain very sensitive to pressure or movement. I have most commonly encountered this class of cases at the tibiotarsal and the tarso-metatarsal articulations. They are usually caused by indirect violence; there is a sudden eversion or inversion, over flexion or extension of the foot, the whole weight of the body being thrown on it.

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*Read at the Annual Meeting of the New York Railway Surgeons, New York Academy of Medicine, Nov. 15th, 1893.

†Visiting Surgeon to Harlem Hospital, New York.

In these the predominant lesions involve the nerve trunks, the bone elements and the thecal termini of the tendons.

HEMORRHAGE (INTRA-CAPSULAR).

It is very probable that a sanguinous effusion into the hollow of synovial membranes is a common sequence of an injury borne by the joints.

The knee-joint capsule is the most capacious, superficial and distensible in the body and it is in this situation that we are the best enabled to observe the course and consequence of intra-articular hemorrhage.

Where the escape of blood has been large we will find the synovial pouch greatly distended superiorly and laterally. The limb is in an extended position and rigidly fixed by contraction of the quadriceps extensor. The patient has a sense of fullness and slight pain, but pressure moderately applied gives no discomfort.

This effusion in all the cases, which have come under my observation and have been treated by palliative measures, has rapidly vanished.

The effused blood first coagulates; it is next liquified and is finally completely absorbed and leaves no trace of it behind. But one might enquire what proof there is that the blood solidifies by clotting within the joint, or that it is completely resorbed? In answer to this, I may say, that I have three times performed an arthorotomy for the evacuation of these athromata, and, in all, the blood was coagulated though not to the same degree in each.

That it leaves no residue or deposit behind is demonstrated by the fact, that no diminution in the strength or action of the joint follows.

In the healthy individual uncomplicated synovial hemorrhage leads to no serious local or constitutional disturbance as a rule; so that the rigidity of the joint, which it entails, is only of a temporary character.

We now come to a consideration of some of those pathological changes of a grave order which threaten the mobility of the joint for all time, or seriously limit it. "When," said Gross, "motion is suspended a long time, the synovial membrane becomes dry and stiff, it eventually pours out a plastic matter, which later ossifies and totally obliterates the synovial cavity." (Gross, *Sys. Surg.*, Vol. I, p., 1091, 9th Ed,). This was essentially Callander's view of the results of the protracted fixation of a joint, though he ascribes the pernicious effects rather to organic changes in the muscles and ligaments than to those in the joint.

It is the opinion of Mansell Moullin, "that prolonged confinement of a joint in a compulsory position may cause serious stiffness after injury, and in one or two cases, in his experience, it has caused entire obliteration of the joint." (Moullin's *General Surgery*, page 419). Inflammation of a joint after an injury, when extensive and of long duration, requiring restraint of the joint, is always a condition which endangers its ultimate strength and freedom of action.

But the most interesting phase of inflammation, to the surgeon here is that of a degenerate type. Motion is Nature's stimulus to an articulation; and it is absurd to suppose, for a moment, that its protracted immobilization may be enjoined with impunity. However, a joint is but a passive organ, and, hence, we will not expect to find, perhaps, in its avascular cartilaginous surfaces, the seat of such extensive atrophic and parenchymatous changes, as will we in the structures which nourish and act on it; in the blood vessels, the muscles, bones and nerves. The circulation in the limb is feeble; the surface temperature of it is lessened, the motionless muscle undergoes interstitial degeneration, with fatty or fibrous changes in the sarcolemma. In the former the muscle has a soft, flabby feel, while in the latter, it is contractured and has a hard, resisting consistency. The bone shares in degenerative changes. The canals of Havers become narrowed and stopped with fat cells; the bone cells are diminished in number and are occupied by a granular matter. Cancellous tissue has increased, while the compact has diminished. The medulla has almost a fluid consistence and the periosteum has become very pale and brittle. The bone has become exceedingly fragile; for though it has increased in bulk, it has parted with its elasticity and strength. Persistent fixation of a joint then means the starvation of those structures that give it motion; and in the end, its own functional destruction.

Inflammation of a joint, as a consequence of injury, happily is not a common condition, and when it does occur, it usually yields to appropriate measures, in so short a period, that the danger of permanent anchylosis is not imminent. It has long been an open question, whether the common arthritic anchylosis of strumous children, has or has not, its origin in traumatisms. It is true that the bacillus has been found in these cases; but that of itself proves nothing, for it is as often found in those children whose joints are entirely free. Sayre and other eminent authorities have espoused the traumatic theory; while many others of equal prominence have taken an opposite view, particularly since in our own recent times the study of the microzyme has become a craze, and germs are said to cause everything. My own impression is, that an injury is at the bottom of the vast majority of those cases. This is the class, and this only, in which the integrity of the joint is not seriously threatened by protracted fixation. This is because of the slow, very chronic course the arthritic malady pursues and because of the type of inflammation which subsists. All the vascular structures participate in the inflammatory changes in severe cases. But, to my mind, a great mistake is being committed, in a large number, by the medical attendant assuming that the case is of tubercular type, when it possesses almost none of its character.

Gross' view that immobilization leads to intra-capsular anchylosis was undoubtedly correct; but he probably was in error, when he ascribed the osseous fusion, as attributable to a low grade of inflammation of the synovial membrane. Indeed we have no proof that the articular surfaces ever solidify into one, except when there has been an ulcerative erosion and complete destruction of the cartilaginous surfaces first. And this we need scarcely look for, except in those who have long been suffering from ulcerative endarthritis.

ANCHYLOSIS AS A CONSEQUENCE OF FRACTURE OR DISLOCATION OF BONE.

Rigidity and immobility of a limb is one of the most common symptoms of a dislocation.

With few and very rare exceptions the dislocation of most bones is readily recognized and is promptly treated.

There is a peculiar dislocation, however, at the elbow joint, apt to escape detection, unless more than ordinary care is exercised. The most constant sign of this is an anchylosis of the fore-arm, which is generally flexed from 20 to 30 degrees, only. It consists of a displacement of the head of the radius under the supinator longus, with a rupture of the articular ligament. It is a common lesion easily treated in children, and is as rare and proportionally difficult to deal with in the adult. I have seen as many as 14 to 15 of these cases in children, and have two now under my observation, in grown people: one in a man and one in a woman.

It is almost incredible that one could overlook a dislocation in any of the major articulations and regard its effects as attributable to joint disease.

At the elbow, however, there is some excuse for overlooking a luxation, when the head of the radius is displaced. If the patient be a female, with a rotund limb, a thick layer of adipose tissue conceals the lesser sigmoid notch, so that, unless special pains are taken, the displacement of bone will not be recognized. In the type of anchylosis resulting from this or other dislocations, the limb is not rigidly immobilized, but permits of more or less movement within restricted limits. It is almost needless to add that in all these cases unless recognized and rectified early, the original articular cavity, or surface, becomes obliterated and a pseudo-arthrosis is formed.

In consequence of the limitation of action and the derangement of the normal relations at the elbow, muscular inactivity, or restraint, is followed by atrophic changes and contraction in those groups, below the elbow, which serve in supination and pronation.

ANCHYLOSIS AFTER FRACTURES WHICH INVOLVE THE ARTICULATIONS.

Anchylosis, temporary or permanent, complete or incomplete, is one of the most common concurrent or consecutive conditions of all fractures which involve the shafts. A fracture which opens into an articulation is always an unfortunate event. It is commonly complicated by a laceration of the ligaments, with a diastasis or subluxation of the articular ends of the bones. Deformity and limitation of joint action often follow osseous union. An anchylosis which is the sequence of a fracture into a joint, presents two independent phenomena. The first succeeds in consequence of the enforced and often necessary prolonged fixation of the limb, in the course of treatment. The second arises from the morbid anatomy which follows vulnerant force, the displacement of bone, the loss of normal relations between the articular surfaces, laceration of tissue and effusion of blood. Along with the consequent acute pathological changes induced by inflammation there is a plastic effusion, which on undergoing organization and osseous consolidation seriously restricts motion ; or should this plastic deposit be copious and the joint be continuously immobilized the functions of it may be totally destroyed through an ossific union of the articular surfaces.

Osseous anchylosis following fracture is very seldom seen ; though in fractures at the elbow joint, through the humeral condyles, in Colles fracture and in a typical Pott, at the ankle in adults, more or less deformity with limitation of motion, is a common sequence, under any therapy ; though its extent is in many largely dependent on the relief measures employed.

In this type of anchylosis following fracture, it may be, in many incomplete. Bradford in discussing this subject (Bradford on Orthopædic Surgery) says : that in many joint action is limited by cicatrization of the capsular ligament and other changes in the arthritic tissues, than the bone. Watson, Price, Bryant and others maintain a similar view.

There is ofteninq a thickening, induration and contraction of the synovial sheath and the ligaments.

Quenu maintains that our actual knowledge of the processes of nutrition in the bones and articulations, is yet very incomplete ; for he says, that the influence of the nervous system is only too evident ; but its precise action is still problematical.

May we not invoke this theory of the influence of the nervous system on the nutrition of joints, to explain, why, in one after an intracapsular fracture, prompt union occurs with slight, if any, stiffness of the limb remaining ; every trace of inflammatory deposits having been completely resorbed ; while in others an incomplete ligamentous anchylosis follows ; and lastly, though rarely, an osseous solder has welded the articular ends into one solid, compact mass.

EXTRA-ARTHRITIC ANCHYLOSIS.

This class embraces a very large number, by all odds the most numerous.

It may be ranged under two common divisions.

1. Those cases the sequence of inflammation, or lesions of the muscles, in which definite organic changes have taken place.
2. Those in which a neurotic element plays a predominant role; or, in which stiffness of the joint follows the injury of a peripheral nerve; or, in the neurotic psychoses, as hysteria.

The best illustration of the first group we will observe in a joint below a recent fracture. At first, there is almost no motion in the joint after union of the bones has succeeded. But in most cases under appropriate treatment, in a little while muscular rigidity is overcome. There is a considerable number, however, in which anchylosis is permanent. These are seen frequently after fracture of the femur. Indeed, in many serious fractures of the shafts of bone, the surgeon is always confronted with the possible danger of anchylosis when he places the limb in an adjustment which will effect protracted immobilization. Troublesome anchylosis of the knee sometimes follows femoral fracture in adults. In these cases, there undoubtedly is at the time of injury an extensive laceration of muscular tissue by the sharp ends of the bones tearing through the muscles. It may be quite impossible to effect a perfect apposition of the separate fragments, and, hence, the rough, uneven bone ends, pushing in opposite directions, into the soft parts produce an excessive irritation; which is followed by a propagation of inflammation into the inter-muscular spaces and muscular sheaths; besides, an excessive provisional callus, which, on definite reduction in volume gathers into its grasp the adjacent tissues in such a gnarled, confused mass that they lose their distinct anatomical arrangement and cannot be thereafter isolated.

This is the most aggravated and serious type of anchylosis seen after a fracture outside of an articulation. In anchylosis of this type, the limb varies in its attitude. When the extensor muscles, as the vasti and rectus have suffered, the position of the limb is one of extreme extension. This is the most common.

As the flexor muscles of the ham taper into tendons at about the middle of the thigh, it is only when the fracture is high up and inflammatory action spreads into the triceps that a fixed flexion is seen after a vicious union of fractured bone in the femoral region. It is a source of satisfaction to know that even in those types of muscular anchylosis but few resist remedial measures, and a fair amount of joint action is ultimately recovered.

But, in occasional cases, complete and permanent loss of all joint action follows. Sometimes, this has been designated as incomplete, or false, anchylosis, because the joint is not implicated: but, as a matter of fact, there is nothing spurious about it for the limb in grave cases is as hopelessly and irremediably crippled as though the articular surfaces were locked together by an osseous bond.

As might be expected in all severe cases of extra-articular anchylosis there is a wasting of the limb, through limitation, or total arrest of action, in certain groups of muscles. The entire limb becomes weak, the circulation is sluggish and in winter weather, the patient suffers from severe cold in the parts below the injured joint.

It may be said, of this type, that there is every gradation; that in most cases injury of the soft parts, from the sharp ends of the fractured bones, is an active factor in the causation, but not the only one. Too protracted immobilization is a passive cause; but, no less serious in its effects than the former. One cannot be entirely obviated. But by judicious management the disastrous consequences of immobilization, if they cannot be wholly overcome, can be greatly minimized.

CASES OF EXTRA-ARTICULAR ANCHYLOSIS IN WHICH A NEUROTIC ELEMENT PLAYS AN IMPORTANT PART.

Quenu (*Chirurg. Gen. tom*, vii. p. 902). observed that by experimentally irritating the spinal nerve roots, through fine punctures the most remarkable cellular changes have been provoked in the articulations. The same author says, that he has witnessed the most distressing types of anchylosis, after injury of the peripheral nerves, especially when these have been caused by gunshot and punctured wounds. (Arthropathies, Dans Lees affections Des Nerves, Peripheriles, Vol. v. p. 393.)

This eminent writer is authority for the statement, that hysterical arthropathies generally have their starting point in trivial surface injuries. The limb, he adds, "becomes immediately painful and assumes a vicious attitude. The limb is especially hyperaesthesic over the articulation. This latter phenomenon he designates "Brodies sign," of hysterical anchylosis. The attitude, he tells us, is quite characteristic in certain cases. For instance, at the coxo-femoral it is the same as that of hip-joint disease in the third stage. At the knee, it may be either extended or flexed; in the tibio-tarsal the foot is commonly extended and adducted. Locomotion, we are told, in this class, varies from day to day: at one time, the patient walking with ease, a few steps when a few days later, the least motion gives the greatest suffering.

To my mind, it is most unfortunate that this type of articular rigidity should ever have had its present prefix.

It has no connection with the genitalia at all; is in no manner impressed by the menstrual molimen and it is not entirely confined to the female sex. In my experience, it is as common in one sex as the other, in early life. We will notice in every case, that our patient is anæmic, in adult life. My observations, in a considerable number of these cases, have convinced me that they are not, as heretofore presumed, always functional; but that they are first dependent on a tubercular cachexia, with an impressionable state of the system arising from a malnutrition of the whole cerebro-spinal system; this constituting the predisposing cause. And finally, a trauma, which under conditions of sound health would pass unnoticed, but, which here, stirs into activity dormant pathological processes.

It should be constantly borne in mind, that the primary lesions, in these cases, is outside the joint.

We may have a neuritis, and a low grade of cellulitis attended with a plastic effusion within the muscle spaces, their sheaths and the tendons thecæ, which are undergoing fibrous changes, binds one muscle to the other, or prevents the movement of the free tendons within their envelopes. It is remarkable with what rapidity these pathological changes follow many comparatively trivial injuries, in a few days. In many we will observe a rigidity which does not yield even under an anesthetic.

Should we always recognize the true character of this class, and overcome it early, the nutrition and growth of the limb, in the child, will not seriously suffer; and recovery, in the adult, is prompt in most cases. But when we misinterpret its true character, or the case comes under observation late, consecutive changes have set in which now involve the joint structures and, we may have a formidable condition to deal with. Interstitial degenerative changes have attacked the muscles which play on the joint, a fibrosis has spread through the muscles fasciculi and destroyed their parenchymatous elements. The tubular striæ, by atrophic changes, have disappeared, or have greatly diminished in activity and number, and a rigid, stiff, unyielding contractured muscle, or group of muscles, remains. This pathological condition may involve one muscle of a group, a single, or several groups; alternately, or simultaneously.

It may be added, that in very chronic, old cases, interstitial, fatty degeneration succeeds muscular fibrosis ; and that when this sets in it spares no structure from the integument to the bone marrow. In all this class of cases, that mental impressions play an important role, is indisputable.

If the patient have sufficient will power, is docile to treatment, and is devoid of despondency; the prospect of recovery, in a brief period, is greatly enhanced.

As to the morbid anatomy in the structures, in neuro-anchylosis, so called, they are quite identical with those considered under the head of extra-articular anchylosis.

CLINICAL LECTURES.

COUGHS IN CHILDREN.*

W. HENRY PRICE, B. A., M. D., PHILADELPHIA.

Gentlemen: In the routine practice of children's diseases, coughs form no inconsiderable percentage of the cases met with, and I present to you to-day three cases which will demonstrate in some measure three different classes of cough in which not only the diagnosis as to etiology is of interest but, as dependant on the diagnosis, the treatment, which is, after all, the most practical consideration —especially so far as the patient is concerned, for little they care about the pathological aspect of the question so long as they improve under treatment.

Bronchitis, either acute, subacute or chronic, forms a large proportion of cases; but not every cough is of bronchitis, and he who fails to examine carefully every case will often overlook a simply cause and utterly fail in restoring his little patient to health.

The first case is this little girl, who presents the following history:—I. R., æt. 5 years; always robust except the usual diseases of childhood—measles, whooping-cough and chicken-pox.

Two days ago she took a heavy cold which showed itself simultaneously in the head and chest—that is in hyperaemia of the nasal mucous membrane with a sensation of dryness and fullness between the eyes, and a hard, dry cough, worse at night, so that the child obtains but little sleep and that most unrefreshing. Besides this, are anorexia, constipation, malaise, coated tongue, lustreless eye and, the mother thinks, fever. Where shall we take the temperature—in the mouth, axilla or rectum? The mouth is preferable for some reasons, but in a child of this age it is a trifle risky, for it is so apt to shut its teeth upon the thermometer and break it, especially in a situation like this, where one feels nervous before so many strangers. Then too the almost incessant coughing is an obstacle and would invalidate the reading even if the instrument escaped breakage. The axilla in children is inconvenient when the child is dressed and, on account of the usual leanness in this situation, the two surfaces are rarely well apposed, air enters and the registered temperature is too low. I prefer either the rectum or the groin. The latter position is cleaner and more convenient, especially in very young babies, for lying upon its back on its mother's lap, the thermometer is slipped in the fold of the groin, the mother gently flexes and adducts the thigh with her hand on the knee, and in two to six minutes, according to the sensitiveness of the thermometer, the maximum temperature is registered. Following out the method in this case we find the little girl has a temperature of 102½° F. The pulse is accelerated, but the count has little value at this moment because of the nervous excitement produced by coming before you.

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Auscultation of the chest reveals the normal puerile respiration (which consists of a harsher and more prolonged expiration than is heard in adults), and on both sides, anteriorly and posteriorly, are numerous sibilant and sonorous râles.

We have here, then, a case of acute bronchitis in the first stage. You will remember that this disease is divided into two stages—the first or *dry stage*, which usually lasts about two or three days, in which there is no expectoration and physical examination shows the dry râles, either sibilant (high-pitched) or sonorous (low-pitched) or both, according to the calibre of the bronchial tube in which the sound is produced. Then the second stage or *stage of expectoration*, sets in, in which there is more or less copious discharge of a muco-purulent character; and now mucous râles replace the dry râles of the first stage. In children under six years, however, there is usually no history of expectoration as a child of this age almost invariably swallows any mucous which may be raised in a paroxysm of coughing. So far as the treatment of such a case is concerned, what is the best combination of drugs to be administered? Most therapeutists will tell you that in the first stage of acute bronchitis, where the mucous membrane is hyperæmic and dry, the only appropriate drugs are the liquifying expectorants, of which citrate of potash may be taken as the type; and above all, opium should be avoided. Our experience, however, in the children's dispensary of the University Hospital, as well as in private cases, does not bear out this testimony as to the harmfulness of opium; for while citrate of potash and its analogues will safely carry the disease into its second stage, a judicious combination containing opium, in many cases will abort the process, so that it never reaches the second stage and the little patient may be practically cured in forty-eight to seventy-two hours.

The prescription which will meet perhaps the largest percentage of cases when seen in the first stage is the following. For a child four to seven years old:

℞ Vini Antimonii........................ m.iij
Syr. Scillae,
Syr. Ipecac............................ āā m.v
Morph. Sulph........................... gr. 1-64
Mist. Glyc. Comp........q. s.......... f. ʒi
M. Sig.—Every two hours.

If the child is not seen until the second stage is well developed or, perchance, the disease has become subacute, opium should be omitted and the ipecac and squills replaced by some more stimulating expectorants as syr. senega and ammonium choloride. The following mixture will be found a good one:

℞ Ammonii chloridi............ ...... gr. iij
Syr. Senegae.......................... m.v
Syr. Prun. Virg.,
Mist. Glyc. Comp..........āā........ f. ℥ ss
M. Sig.—Every three hours.

If the secretion remains thick and tenaceous, potassium iodide in three grain-doses may be added to the above prescription for its known action in liquifying mucous secretions.

Cases often present themselves in which, through neglect or improper first treatment, the cough has run into the chronic form, with a history of having lasted perhaps one or two months. In such cases turpin hydrate or terebine, five drops on a lump of sugar, four times a day, will often effect a cure when all other drugs fail. Beyond this internal medication, a useful adjunct, either in the acute or chronic phase of bronchitis, is found in the counter-irritation afforded by rubbing oil of amber (ol. succini) on the chest both anteriorly and posteriorly, night and morning.

By way of contrast as to etiology and treatment, let me direct your attention to a second case. This little boy, J. R., æt. seven years, came to this dispensary three weeks ago, with a history of having had a cough for three months, which had resisted all forms of treatment instituted by several physicians, and which on account of its persistency, the mother feared was beginning phthisis, and naturally was very apprehensive of his condition.

At his first visit the case seemed chronic bronchitis—numerous mucous râles were scattered throughout both chests and the case apparently in nowise differed from an ordinary one, so that we too were at first misled into the usual routine treatment applicable for cases which had reached a chronic stage. After two weeks conscientious treatment, however, finding that the lad showed no improvement, we were led to inquire more carefully into the previous history of his health. The first thing which made us suspicious was that the family resided near the banks of the Schuylkill, and following up this clue we learned that the child had had quite typical paroxysms of chills and fever.

This made us believe at once that we had here a case of malarial cough, and accordingly the treatment was changed to 3 gr. doses of quinine four times a day in syrup of yerba-santa. The improvement which followed the administration of this drug was both gratifying and instructive, and in less than one week the cough had entirely disappeared.

A third case, which serves as a text to show the importance of always making a thorough examination of your patient, is presented in this little boy, five years of age, who has a history of having had a chronic cough lasting for two years, which the mother says, came on soon after the child's convalescence from scarlet fever. Percussion and auscultation of the chest gives no explanation of the cough, but upon closely examining the fauces we find that both tonsils are greatly hypertrophied, which condition is quite sufficient to explain the perseverance of the cough. Such cases are not infrequently met with and the treatment consists in the internal administration of some alterative tonic, such as the syrup of the iodide of iron in combination with cod-liver oil, together with the local application of some astringent gargle to lessen the congestion and super-sensitiveness of the mucous membrane of the tonsils. Where the hypertrophy is more pronounced than in this case—the two tonsils sometimes meeting in the center—local applications are usually of little avail and resort to the tonsilatome must be made.

Closely allied to this, is a cough kept up by a relaxed and elongated uvula. We had one such case under treatment where, after the second day's use of a tannic acid gargle, the cough entirely disappeared.

Before leaving this subject, I cannot refrain from saying a few words about another form of cough, where, on account of its seriousness, it is highly important that a diagnosis should be made early. I refer to the cough of pneumonia. Most authorities agree that the pneumonia most frequently met with in young children and babies is the catarrhal variety and the areas involved in this process necessary to make the baby a very sick one, are often so small that diagnosis by physical examination of the chest is sometimes very hard to make. It is in this case, however, that the peculiarity of the cough gives us valuable aid in coming to a conclusion as to the presence of pneumonia.

Where the baby gives one or several short coughs, followed immediately by a suppressed cry, with an expression of pain on the face, it is very suggestive, and if this sign is accompanied by dyspnœa, in which the nasal alæ play more or less violently and the temperature is elevated, we will rarely go astray in making a diagnosis of catarrhal pneumonia, irrespective of physical signs.

The Advantages of Medicine as a Career.

Not enjoyment, and not sorrow,
Is our destined end or way,
But to act, that each to-morrow
Find us farther than to-day.

In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle;
Be a hero in the strife!

Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time.

Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait.

LONGFELLOW.

COMMUNICATIONS.

SUPRA-PUBIC CYSTOTOMY.

O. C. STRICKLER, M. D., New Ulm, Minn.

So little is written in our surgical works of the technique, preparation and after treatment of cystotomy, that I think something in this line may be of value.

In the first place, after a case of vesical stone has been diagnosed, the question naturally presents what operation is to be selected.

Should one choose the perineal operation with its disadvantages and the long time required after operation for complete recovery, or should lithotomy and litholapaxy be considered? And what advantages has the supra-pubic operation over these different operative procedures?

We must first select an operation with low mortality, and one allowing the patient in a short time to again take up his vocation. We must admit that until late years the high operation, although seemingly an ideal one, was attended with an unusually high death rate, but aseptic surgery has removed this great objection and placed the operation on a permanent footing.

Prof. Keyes, in the *International System of Surgery*, refers to the results obtained by Billroth, "that of sloughing of the cellular tissue in the neighborhood of the wound," but this occurred in cases of children, and then before the days of asepsis. The visitor now attending Prof. Billroth's clinics finds no such results. During the time spent in Prof. Bergmann's clinic, I saw probably fifty cases without a single death.

W. W.; age forty-six; had been suffering with bladder difficulty nearly two years, and, as the pain was not constant, he neglected to call professional advice until his condition became a pitiful one. Unable to sleep; urine filled with mucopus and blood; unable to properly evacuate the bladder without assuming the recumbent position, all showing the necessity of making a thorough examination in order to discover the true state of affairs. The pain was so severe at the first and subsequent visits, that I did not at once make any exploration with a sound, but as soon as the active symptoms subsided this was done, and the characteristic "click" easily obtained.

The patient at first would not consent to any operative procedure, but after consulation with Dr. Daniels of St. Peter, Minn., and Dr. Fritsche of this city, he finally consented. The diagnosis and its evident line of treatment being so plain, we not only insisted on an operation, but that it be done as soon as the proper preparations could be made.

I first used preparatory vesical injections of a warm solution of boracic acid, four per cent., in combination with the internal use of infusion of juniper and benzoate of soda. This had a very happy effect in clearing up, to some extent, the urine, and with the use of morphia, materially reducing the cystic irritation.

The operation was performed Sept. 2, with the assistance of Drs. Fritsche and Hirsche of this city.

The pubes were shaven the day previous and strict antiseptic precautions followed throughout. In order to assist in the operation, a large curved prostatic catheter was used, which by depressing the external end caused the opposite to project against the anterior abdominal wall. Eight ounces of a warm four per cent. solution of boracic acid was then injected and retained in the bladder. In a rectal colpeurynter, which had been introduced into the bowel, twelve and one half ounces of warm water was injected by means of a common hard rubber piston syringe. This forced the bladder out of the pelvis and made the abdominal walls moderately tense. Before giving an anæsthetic, an injection should be made into the bladder to test its capacity, thereby preventing the possibility of over-distension.

The operation was then performed by making an incision about three inches in length, in the line of the linea alba, and by depressing the catheter still *in situ*, no difficulty was experienced in finding the bladder wall. The wound was then thoroughly irrigated and, after fixing the organ with tenaculum-pointed forceps, an opening was made allowing the boracic solution to freely escape.

On insertion of my finger I found the calculus to be single, as previously diagnosed, and that the vesical walls were much thickened. The stone was then extracted by means of a calculus forceps; the organ thoroughly irrigated; the bladder wound closed with fine silk, by means of a double continuous suture, bringing the serous coats together without penetrating the bladder wall. The wound was then packed with iodoform gauze; a soft catheter introduced to allow permanent drainage and the patient brought to bed.

He was unable, however, to retain the catheter, so that I was compelled to draw the urine every three to four hours. Some urine escaped through the wound twice, but at no time was the temperature above 99°, and on the fifth day the patient had a natural evacuation, although I occasionally drew the urine until tenth day.

The patient returned to his home two weeks after the operation, September 16, and was again at his work on the twenty-third day.

The urine after the tenth day became clear and has remained so.

That such results are possible, speaks volumes for the operation; not that a conclusion can be drawn from one case, but the results where strict antiseptic precautions are followed are such that the high mortality rates for this operation (33 per cent.) quoted previous to the days of Lister, should not now be held to be the correct ratio. I might give mortality figures as quoted by Professor Bergmann, but as I have already occupied considerable space and as I have not seen any late figures collected from different operators I will desist.

The stone in the above recorded case was of the mulberry variety, weight one hundred and twenty-seven grains (127 grains).

DIAGNOSIS AND TREATMENT OF EMPYEMA.*

O. C. BAKER, M. D., Brandon, Vt.

In my paper I shall speak of empyema only as pus in the pleural cavity and not in the general sense of the term. My purpose in discussing this subject is to ever keep fresh the diagnosis and treatment of this condition which, as a rule, means very much to the person afflicted. A wrong diagnosis, as a rule, means death to the patient, while a correct diagnosis and proper treatment often give prolongation of life and a good degree of health. Furthermore, I can truthfully say that a wrong diagnosis is often made in this not very rare disease. In proof of this statement I can recall cases which have come under my own observation, which had existed from three months to five years, with wrong diagnosis and consequently wrong treatment.

In taking up the diagnosis of empyema I shall not be able to present many new things, but hope to refresh some minds and thus help them to be ever on the alert for this pathological condition which so often takes us unawares. The diagnosis of pleurisy with an effusion of serum or pus gives nearly the same symptoms, consequently the main question in the case to determine is whether we have an effusion into the pleural cavity or not. The difficulties of diagnosis in pleurisy belong chiefly to the earliest and latest stages of the malady. In the earliest stage the pleurisy may be latent and so beyond the possibility of diagnosis; or pain may be felt and this may be due to pleurisy, pleurodynia or other causes. The pain is occasionally referred to the loin or abdomen, thus leading to suspicion of mischief elsewhere. Few errors are more common than the attribution of pleuritic pains to pleurodynia. The pain disappears as an effusion slowly accumulates and mischief and peril perhaps hardly remediable may be the consequence. The careful observer will listen anxiously to the chest day by day, or more than daily, until a friction sound is heard; further mistake is impossible. Fever may be present if the case is pleurodynia, and an immediate diagnosis would then be impossible unless something characteristic in the stitch and start on deep inspiration betray the real state of things. Neuralgic and inflammatory diseases of the walls of the chest are not likely to give rise to any permanent misunderstanding. A difficulty is likely to arise in distinguishing between pericardial and a localized pleuritic effusion. In rheumatic fever and in some other diseases, pericardial may accompany or ensue upon pleuritic effusion, and when the latter is on the left side and is abundant, the limit beyond the two may be beyond defining. The practical lesson is to remember the likelihood of pericardial effusion and not overlook it if it comes.

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* Read before the Vermont State Medical Society, October 13, 1893.

The diagnosis between exudation and pulmonary consolidation is sometimes difficult. In acute pneumonia the course of the fever, the expectoration and other symptoms help us to a decision. Limited effusions—such as an encysted empyema, not large enough to bulge the intercostal spaces, to crush up the lung, or to displace other organs, are at times quite indistinguishable from a like extent of chronic consolidation, or abscess in the lower lobe of the lung. Such collections, though usually basic, are by no means always so, but, retained by adhesions, may occupy the upper and anterior part of the middle region, or strips or irregular districts in any direction. It may be said in general terms that a permanent very dull area remaining after an acute pleurisy or pleuro-pneumonia most probably corresponds to an encysted empyema, but not always. In such cases fever may be entirely absent, and the general condition of the patient may not suggest disease; yet such a collection of pus is sure to work mischief sooner or later. Years in some cases may elapse, but the patient rarely escapes with impunity at last.

The difficulties of distinguishing bulky effusions from pulmonary consolidations are not often great. In the former the intercostal spaces may be bulged and the moiety of the chest enlarged. It but very rarely happens that consolidation reduces the lung to silence, though this may be the case. Between intra-thoracic tumors and large pleuritic effusions a difficulty is found only in those cases in which the tumor occupies precisely one-half of the chest. This is not very uncommon especially in aneurism. It must not be forgotten too that fluid effusion may accompany tumor. A curious pulsation of uncertain explanation is often seen in empyema, and must not be mistaken for an aneurism. A hemorrhage into the pleura can be distinguished from purulent effusion only by a careful survey of all the history and symptoms. The direct physical signs help us but little. Large pulmonary cavities may be taken for encysted empyema with fistulous opening into a bronchus, and here again, although a pulmonary fistula rarely gives rise to tubular breathing unless the opening be very large or communicate with a secondary cavity, yet the diagnosis by the direct signs might be impossible. The history of the case and the state of the other lung would be important factors in decision.

The distinction between chronic phthisis and pleurisy may be difficult.

In summing up the whole matter of diagnosis of empyema, we have one test which, as a rule, clears the subject up more certainly than anything else, and that is the hypodermic needle. In any case that gives flatness on percussion and gives me any suspicion that empyema might exist, I do not hesitate to introduce a rather coarse hypodermic needle and repeat it several times, if need be, until I feel sure whether pus is or is not present. In acute pneumonia, when the case is prolonged beyond the ordinary period, I am always suspicious of a pleural effusion of serum or pus. When I hear of hepatized lung after pneumonia continuing several weeks, I am disposed to conclude there is a faulty diagnosis, for I have never met such a case in practice.

In the treatment of empyema at the present day, doubtless all physicians are agreed that pus in the pleural cavity demands immediate evacuation. Just the best way to bring this about, where, when and in what way we shall get rid of the pus, often leads to a difference of opinion. I also think we are all agreed that the treatment must be surgical. I know of no practitioner who would wait for natural processes to rid the system of the accumulated pus. I think the treatment can be readily included under the heads of aspiration, free opening with or without a drainage tube, and rib resection. I have repeatedly tried aspiration and have every time been disappointed in effecting a cure. I have seen patients improve a little after aspiration, and think they were better able to undergo more radical treatment. From this experience I have learned to aspirate only if I wish to place my patient in a little improved condition, so as the better to enable him to endure further operations with safety. I have treated cases with simple free incision without and with drainage tubes. The results in the two ways have been about the same. If in the treatment it is thought best to wash out the cavity, the drainage tube is well nigh indispensable. I think some surgeons advocate that in all cases rib section of two or more ribs should be done. I have never found it necessary in any of my cases, although one case was of five years duration before external drainage was made. Doubtless rib resection is necessary in a small percentage of cases. Whether we shall wash out the cavity or not, has given rise to opposite opinions among equally bright minds. Cases of foul-smelling pus might be an indication for cleansing, while a case discharging laudable pus will give good results with simply keeping the drainage free. The precise place for making drainage is at the lowest point that it can be safely made. This is a practical point that I consider of the utmost importance. A safe guide is to always introduce an aspirating needle and draw away a few drops of pus to make sure you are not opening below the diaphragm or too close to its upper surface. Some authors instruct us to make two openings near together and pass a drainage tube in at one opening and out at the other opening. Perhaps the next author warns you to beware of the above treatment as it will act as a seton. The only bad effect that has occurred in my practice in drainage tubes is the liability to cause necrosis of the ribs.

General practitioners are, as a rule, rather timid about operating for the relief of empyema. Any physician of ordinary surgical ability need not be afraid to at least made a free incision between the ribs, only being careful not to wound the intercostal artery. This is all the operation in a majority of cases will need.

SOCIETY REPORTS.

FIRST PAN-AMERICAN MEDICAL CONGRESS.*

SECTION ON OTOLOGY.

C. M. Hobby, M. D., Iowa City, Iowa, President. Max Thorner, M. D., Cincinnati, O., Secretary.

The President, in his address of welcome, laid stress upon the fact that this meeting of the first Pan-American Medical Congress would afford to the otologists of America opportunity of interchange of opinions between the north and south, the more than 100 degrees that separates the confreres; and expressed the hope that hereafter we may frequently share in similar opportunities for comparison of experience. Continuing he said: "Meanwhile we have assurance of the kindly help of our fellows from the denser populations of Europe; and I congratulate you upon the presence with us of one whom we all reverence as a master; for whether we have been pupils at Vienna, or have through literature gleaned the steps by which otology has advanced since the days of Toynbee, there is not one of us but who acknowledges a debt of gratitude for the landmarks established by Professor Adam Politzer; and I think I voice the universal sentiment of felicitation that this genius is still active, and that he is here to speak for himself. I assure you that you will hereafter rejoice to have been present."

THE PREVENTION OF DEAF-MUTISM,

by Dr. C. M. Hobby, Iowa City, Iowa.

The proportion of deaf-mutism remains nearly constant, as judged by census returns, and taking the defective classes as a whole, viz:—insane, iodiotic, blind, and deaf-mutes, constitutes 14 per cent. of those to be considered, a total of more than 50,000. In considering how large a number may come to be considered as preventable, we are met with the assumption by teachers and authors of text-books, that 50 per cent. of the mutes are congentially so. But this is not in accordance with facts, at least for the United States, as it is readily shown that not more than 14 per cent. and probably only 10 per cent. are born deaf. Again, middle ear disease plays only a small part in the production of mutism. Severe middle ear lesions of both ears is only found in about 14 per cent. of these cases, and doubtless labyrinthine disease exists in the majority of these. Even in cases attributed to scarlet fever less than one-half exhibit distinctive lesions of both middle ears.

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* Held in Washington, D. C., September 5, 6, 7 and 8, 1893.

The principal cause of deafness resulting in deaf-mutism, is to be sought in the various forms of meningitis, occuring in the early months of life, and the resulting labyrinthine disease, cerebro-spinal fever being a prominent factor in the United States.

Prevention must come then principally from associated study of clinical history and pathology, and especially pathology little understood, of inflammations of the pia mater. Great difficulties arise from the difficulty of recognizing disturbance of hearing in infants, and in the fact that the ear lesion frequently follows the acute disease without external manifestation and after a considerable interval of time. Especially should the general practioners of the country be warned of the frequency with which deafness follows apparently slight ailments of children, and they should be impressed with the fact that destruction of hearing most frequently takes place without symptoms referable to the ear.

OTACOUSTIC TREATMENT—ITS HISTORY AND RESULTS UPON THE DEAF AND DEAF-MUTES,

by J. A. Maloney, M. D., Washington, D. C.

Experimentation in physics, and principally acoustics, prior to 1886, resulted in the development of the instrument, since known as the otophone, which differed in construction from anything used for that purpose. It had two chief characteristics:

1. It did not enter the meatus auditorious externus.

2. It was a tube closed at one end by a flexible membrane, and thereby confined a column of air.

The instrument was demonstrated before the College of Physicians, of Philadelphia, in 1887, and subsequently tests were made upon deaf mutes at the "Pennsylvania Institution for the Deaf and Dumb," and at the "National Deaf Mute College," Washington, D. C.

It then occurred to the author that a new field of treatment in chronic deafness might be opened. A great deal then was dependent upon tentative deduction. In the use of Politzer's inflation slight benefit was conferred by equalizing the pressure upon each side of the membrana tympani. In the use of the otoscope success was rare, because it produced noise, and the ear in the higher and lower animals shrinks from the same.

Then he directed his attention to a system of aural massage, which had for its chief feature sound arbitrarily applied as a therapeutic agent in chronic deafness, and designated by him as "otacoustic treatment," which has since been known by that title. Much time was required in formulating the method of treatment during the first two years, the work being empirical because he had no rule of procedure based upon experience of others for his guidance. That partial anchylosis could be relaxed by this form of passive motion was accepted by some of the most eminent otologists of our day, and he was encouraged by them to persevere. A number of cases was then reported, showing the good results of otacoustic treatment upon deaf and deaf mutes.

Prof. Adam Politzer demonstrated a large collection of magnificent anatomical and pathological specimens. He also exhibited a number of new and improved ear instruments.

"PATHOLOGICAL CONDITIONS FOLLOWING PIERCING OF THE LOBULES OF THE EAR,"

by Dr. Max Thorner, Cincinnati, Ohio.

The custom of piercing the lobules of the ear for the purpose of wearing earrings is considered a relic of barbarism and superstition. Not rarely serious and even fatal consequences have been observed after this procedure. Scattered through medical literature we find reports of trismus, erysipelas, severe inflammations, disfigurations, formation of tumors, etc., mentioned as possible sequelæ of this reprehensible custom. The following cases have come under the observation of the author:

Erysipelas of the auricle. Three cases. The first was a child two years old, the two others adults, in whom a severe attack of erysipelas, spreading over neck, scalp and face, developed soon after the placing of the ear-rings.

Deformities. Two cases of cleft lobule were seen, caused by the ear-rings cutting through the lobe. In one case the ring had been replaced close to the slit left by the first ring, and there resulted a lobule consisting of three narrow strips. An operation after the method of Knapp, gave good cosmetic results. In another case the opening made for ear-rings had become enlarged to the size of a lead pencil. The opening was closed by one suture after paring the edges.

Eczema of Auricle, acute as well as chronic, was observed in a number of cases. The acute form yielded readily to treatment with ointments (*e. g.* Ung. Diachylon), after the ear-ring had been removed. The chronic form is more obstinate.

Tumors of Auricle: Three cases: One case of fibro-chondroma of auricle in a white lady, aged 32. Began to make its appearance ten years ago. Was twice removed, but reappeared soon. About three years ago had reached the size of a small chestnut, involving the whole lobe. Was then removed by a V shaped excision, and had not returned two years after the operation.

The second case was a typical fibroma of the auricle. The patient was white, 35 years old. When 15 years old her ear-rings were caught on a pillow, and both forcibly torn out. A lump began to grow in both lobules, which were partially amputated two years later. The left tumor has never returned. The tumor in the right ear returned six times. Two years ago the tumor had reached the size of a large English walnut, involving the larger part of the auricle. The whole auricle was then amputated. The tumor has not returned.

The third case was that of a keloid of the auricle and face. The patient was an unmarried lady, white, 35 years old. When 18 years old a small, very painful tumor developed in the edge of the puncture made for ear-rings. Within the following 17 years this tumor was the cause of untold misery for the patient. She had been operated upon with the knife six times, and caustics in untold quantities, electrolysis, hypodermic medication, etc., had been tried again and again. She was hardly ever free from pain, which always increased at the time of her menstruation. There was a solid, sessile tumor, about 1¾ inches in diameter, extending from the cicatricial edge of the auricle, of which the lobule was gone, into the cheek. Removal was effected by an elliptical incision in healthy tissue, and the tumor lifted with a portion of the subcutaneous adipose tissue from its location. No signs of recurrence 14 months after the operation. On former occasions the tumor commenced to reappear within six months. The microscopic examination showed the removed tumor to be a true keloid.

The author concludes that these cases are more frequent than we usually think. "And while in most cases no serious consequences result from the folly of piercing the lobes, yet there occur from time to time cases where a life is at stake, or where the enjoyment of life is seriously interfered with. It is time that this relic of barbarism ought to be relegated where it belongs,—to the by-gone follies of superstition and fashion. And the day is, I hope, not far distant, when it will be considered an evidence of brutality to have a tender and unprotected child subjected to such an unnecessary and mutilating procedure."

Discussion by Prof. Politzer and Dr. Holmes.

ON A PECULIAR AFFECTION OF THE LABYRINTHINE CAPSULE AS A FREQUENT CAUSE OF DEAFNESS.

by Prof. Adam Politzer, Vienna.

The subject of the writer's paper was a particular form of deafness, occurring usually in an older person, and due to a pathological alteration of the labyrinth capsule. During the examination of a number of temporal bones of people who had suffered from progressive deafness, the author remarked circumscribed bony protuberances in the neighborhood of the niche of the fenestra ovalis. These protuberances were of the size of a lentil, rather flattened towards the edges, and contrasted with the surrounding parts by their yellowish color. The mucous membrane of the tympanic cavity was generally normal, occasionally somewhat thickened. The fenestra ovalis was, in some specimens, of normal appearance; in others narrowed by protuberances. The stapes usually immovable; in very few specimens, however, slightly movable.

In the second edition on 'Diseases of the Ear,' published in 1887, may be found a drawing of a case of long anchylosis of the stapes. Besides changes in the stapedio-vestibular articulation, the capsule of the labyrinth shows considerable enlargement of the lacunar medullary spaces. These changes were interpreted by the author, as well as by others who had observed similar conditions, as being due to chronic interstitial middle ear catarrh.

The study of the specimens which the author demonstrated to the Section, showed that this view is not correct, and that these cases which have usually been grouped under dry, sclerotic middle ear catarrh, are in reality due to a primary lesion in the capsule of the labyrinth.

The following are the histological changes observed in the microscopical sections made from the specimens: The parts surrounding the oval window are transformed into a uniform mass of newly formed osseous tissue. The normal articulations between the stapes and oval window have entirely disappeared. The plate of the stapes is frequently thickened, even to five or six times the normal size. The ossificatory changes begin in the bony labyrinth capsule and extend towards the oval window and the plate of the stapes, sometimes even towards the cochlea and the vestibulum.

Sometimes the ossificatory changes only produce partial ossification of the stapedio-vestibular articulations so that in the same section we find one portion of the articulation completely ossified and another still membranous. The partial anchylosis explains why the hearing power for a loud voice is still retained in some cases.

The newly formed osseous tissue stains more deeply with carmine, and this difference in color enables us to distinguish the pathological tissue from the normal even with the naked eye. The number of bone corpuscles is usually increased; the lacunar and medullary spaces are generally larger, and contain fibrillar tissue, cells, blood vessels, osteoblasts and osteoclasts.

It may be well to assume that the changes are due to a primary inflammatory process in the labyrinth capsule, producing a formation of new and young osseous tissue, which successively replaces the normal bone, and by extension towards the stapes and other contiguous parts finally causes the important functional changes due to anchylosis of the stapes.

These conditions represent one form of progressive deafness ; that other pathological conditions, entirely different in character, caused by chronic middle ear catarrh, such as calcifications and ossifications of the stapedio-vestibular ligament, or adhesions between the branches of the stapes and the lower wall of the niche of the oval window may often produce similar clinical symptoms is a well established fact.

Very little could be ascertained in regard to the etiology of this form of progressive deafness, as the disease was observed in old people from whom it was impossible to obtain an accurate history. In two cases gout may be assumed as a possible cause.

That syphilis undoubtedly may cause such conditions may be assumed from the investigations made by Moos, who found hyperostotic changes on the labyrinthine wall of the tympanic cavity.

Specimens and drawings were exhibited and explained by the author, illustrating the conditions described.

In conclusion, the writer refers also to the practical bearing of his investigations, in as much as these conditions demonstrate to us why our therapeutic efforts are not always crowned with success. An operation can only afford possibilities of success provided the affection in question has not yet caused anchylosis, and that even should an operation in some cases bring immediate relief, a permanent result can hardly be expected if the anatomical changes, which were exhibited in the specimens, are only considered, in as much as the affection is progressive, and even the extraction of the stapes would not prevent an obliteration of the oval window.

ON THE APPLICATION OF STACKE'S METHOD IN CHRONIC AURAL CATARRH,

by Dr. Felix Cohn, of New York.

The results obtained by the method usually employed in excision of the ossicles have not been very encouraging, so that the author attempted the application of Stacke's method of operation,—which he calls extra-auricular, in contradistinction to the ordinary method, the intra-auricular—in these cases. Although no cases of its application in chronic aural catarrh have been as yet reported, *a priori*, this method appeared to have considerable advantages over the usual method, chiefly in that the regeneration of drum-membrane might be prevented if the entire tympanum and the limbus be removed; that, the external wall of the attic being removed, a larger area for the impact of sound-waves on the stapes and oval window is provided; that the intra-auricular method does not permit of thorough asepsis; and, finally, that the field of operation being larger, the successful removal of the ossification is, in all cases, certain. As the operation was experimental, in both cases, only one ear was operated.

Two cases are reported: Case 1, Man æt. 21, operated November 21st, 1892, on left ear; suffered from severe tinnitus and progressive deafness. In left ear conversation in low voice not at all audible; loud whisper, one inch. Six weeks after operation tinnitus entirely disappeared in operated ear; ordinary conversation, three feet, low voice, eight feet.

Case 2, Girl, æt. 16, suffering from sclerosis and stapes-anchylosis, operated December 15th, on left ear. On examination, hears loud voice at one foot; immediately after operation hears ordinary conversation at 1½ feet, loud voice 8 feet. Six weeks later, hearing is reduced to condition before operation.

The author does not claim any wide applicability of this operation, or the extra-auricular method, in the present state of our knowledge of chronic aural catarrh. Though the success of the experiment has not been brilliant, it has, however, demonstrated the perfect safety of this method, and its availability in cases in which the intra-auricular method is not practicable; with improvement in diagnosis and careful selection of cases, the author believes that better results will be attainable by Stacke's method than by the intra-auricular method.

OPENING THE MASTOID CELLS IN ACUTE INFLAMMATORY MIDDLE EAR DISEASES,

by Dr. L. D. Brose, Evansville, Ind.

Although the indications as laid down in the text-books for opening the mastoid cells in acute middle ear diseases seem well defined, it has nevertheless been my experience to have met with cases where, notwithstanding the symptoms present indicated mastotomy, and because of failure to get the patient's consent, or because the operation through other causes was delayed, the patients eventually recovered solely through local treatment.

Otorrhœa accompanied by pain, œdema over mastoid and fever, resisting antiphlogistic treatment for eight days (Schwartze), is an indication for mastotomy, especially if the posterior wall of external hearing canal is swollen and bulging, and deep-seated furunculosis is excluded. In acute suppurative middle ear inflammation, without mastoid involvement or pus retention, resisting usual treatment two or three weeks, mastotomy is indicated (Dr. Heiman, of Warsaw). Also as a prophylactic measure when the ear drainage is insufficient, because of swelling of the middle ear lining membrane, or size or location of drum perforation or stenosis of auditory canal. Cerebral abscess, suppurative phlebitis with sinus thrombosis, extra-dural suppuration and meningitis, even with the presence of pyæmic or septic symptoms, indicate mastotomy. Otherwise incurable and recurrent mastoid neuralgias indicate opening the mastoid.

In operating, the author follows on the whole the directions laid down by Hartmann. The operation is terminated when pus is reached. For more extensive suppuration, and where the attic is largely the seat of the disease, the posterior wall of the inner end of the auditory canal may likewise be removed, and a drainage tube at times carried through the new formed opening and out of the external meatus. Good results can be obtained equally well with chisel or trephine, more depending upon the operator than the instruments with which the operation is performed.

CHRONIC DISEASE OF THE MIDDLE EAR; ITS PROGNOSIS AND SURGICAL TREATMENT,

by Dr. Albert H. Tuttle, of Cambridge, Mass.

In a brief history of the operation for removal of the membrana tympani and ossicles it was shown that, in the begining the operation was performed for the relief of deafness ; later when the operation was applied for the relief of chronic suppuration, the earlier indication was lost sight of and only at a recent date have operators removed the membrana tympani and ossicles to obtain an improvement in hearing. In the dry form of aural catarrh the writer claimed a great improvement in hearing occurs when the foot plate of the stapes is removed, especially in those cases where the deafness is marked and the stapes firmly fixed in the oval window. The operation under these circumstances is a very difficult one owing to ossific deposits in the attachments of the ossicles and an atrophy of the cruræ. When the stapes is firmly fixed the removal of the incus alone is a useless operation. In some cases, owing to the shape of the external meatus, the removal of the stapes may be impossible. The patients recover rapidly and suffer only for a few hours from vertigo which is sometimes absent.

In the suppurating otitis media the removal of the larger ossicles was recommended, but the writer promoted the reformation of the membranatympani by leaving as much as possible of its marginal attachments, on account of the belief that continual suppuration after the removal of the ossicles and treatment of the middle ear is due to mastoid disease and requires a special operation, and the greater tendency to recurrent suppuration where the cavities of the temporal bone are not protected from atmospheric influences by the presence of a protecting membrane.

The indiscriminate removal of the ossicles in cases of vertigo and tinnitus was cautioned against, and the operation only recommended where such cases as adhesions of the membrana tympani or anchylosis of the ossicles can be predetermined. In complete occlusion of the Eustachian tube the removal of the membrana tympani and ossicles is a questionable procedure, and in ossification of the membrana tympani the piecemeal removal of the deposit is recommended.

THE INDICATION AND PREFERABLE METHODS FOR MASTOID OPERATIONS,

by Dr. S. S. Bishop, of Chicago, Ill.

The author believes that the majority of surgeons are too conservative both as to the time selected for surgical interference and the extent of the operation. He has seen fatal results follow, (1) refusal to allow the operation; (2) after operation too long deferred; and (3) after operations that were performed too timidly to remove all the diseased tissue; but he has never known a death to occur as the direct result of the operation itself.

The disease demanding the operation is far more dangerous than the right surgical measures for its relief. Greater freedom of action and boldness of methods will add luster to the records of our work.

Dr. Bishop has formulated the following six rules by which he has been guided in deciding when to operate. The mastoid should be opened:

1. When there is acute inflammation of the bone that resists palliative treatment.
2. When repeated swellings and abscesses occur.
3. When there is bulging of the posterior and superior wall of the meatus with middle ear suppuration.
4. When there is a fistula.
5. When there are severe pains in the same side of the head as the diseased ear, resisting all other treatment.
6. When a foul otorrhœa cannot be cured by other means.

His choice of an operation is generally Schwartze's, modified according to the exigencies of each case. Stacke's method leaves too extensive a wound surface, and it takes too long to heal. There is a tendency to resulting stenosis of the external meatus that demands the use of supporting tubes.

Light reflected from a forehead mirror is preferred; and the wound is kept partly open with iodoform gauze until it heals from the bottom. Aristol is the best cicatrizant and has soothing or anæsthetic properties.

DISCUSSION ON THE PRECEDING FOUR PAPERS.

Dr. C. R. Holmes, in opening the discussion, could not agree with Dr. Cohn that the operation by the Stacke method was more aseptic than when the operation was performed through the external canal. The results from the operation in chronic catarrh of the middle ear have been anything but satisfactory, and therefore there is little to justify us in making such an extensive operation as proposed.

He did not think that drills and trephines, as mentioned in Dr Brose's paper, should even be considered as a part of the armamentarium of the modern aural surgeon. They are instruments that had their day and defenders, but are (and justly so) relegated to the past. He was not in favor of using the drainage tube, as described by Dr. Brose, passing through the opening in the mastoid into the middle ear and out of the external canal because if the disease warranted such an extensive interference with the middle, ear, the method of operation was not radical enough; and if only for the purpose of giving vent to the mastoid cells, it is not good surgery to meddle so much with the middle ear and endanger the position of the ossicles.

He had examined cases where the stapes had been removed; Schwartze's and Lucae's experience had been very unsatisfactory. He read a letter recently received from Prof. Schwartze and another from Dr Stacke, wherein both spoke unfavorably of the operation; and Prof. Schwartze, referring to the reports by Dr. Jack, declared that the time for judgment upon those cases is entirely too short, and at present he does not believe the results will be what has been claimed.

He agreed with Dr. Bishop that aural surgeons had been to conservative in operating, and it was especially true that many did operate, but were too timid. If we have once determined that it is necessary to operate, we should use the utmost care to guard against opening into dangerous parts, but we should be bold enough to remove all the diseased tissue. He also begged to call the attention of the gentlemen to the fact that Wilde's incision should not be practiced. Schwartze has omitted it in his last work, because it is painful, and if the disease has advanced far enough to warrant the operation, the cells in nearly every case are also involved, and the patient can only be benefited by opening the bony cortex.

If the flap is formed from the lining of the external canal according to Stacke, there can be no collapse after the operation; and with proper packing, stenosis should never occur. In the experience of the speaker, the canal will admit of the largest sized speculum being used; and every part of the cavity can be freely inspected. We do not expect the cavity formed by the removal of diseased tissue to be filled with cicatrical tissue. In fact, this is the most undesirable thing that can happen. What we do want is a cavity covered with healthy epithelial cells; and this can never be accomplished unless firm and persistent packing is practised until all of the cavity is covered with epithelium.

Prof. Politzer remarked that he never opens the antrum in acute cases. The mastoid trouble is in acute cases rarely in communication with the antrum, and it is better to open simply the mastoid cells. We have thus a clean wound which heals rapidly. Of late he has tamponed the wound for one or two days with iodoform gauze, in fact has sometimes closed the wound immediately after the operation, after having scraped away all diseased bone. The patients were able to leave the hospital after one week.

In cases of chronic sclerotic middle ear catarrh he does, on the whole, not expect to get good results from the extraction of the ossicles. In some cases the operation is liable to impair the condition of the ear. In chronic purulent cases he thinks we must expect little from the extraction of the ossicles alone. Kuster's method of opening the attic and antrum has been by him employed with good results.

Dr. Felix Cohn wished to state distinctly that he is not an advocate of the excision of the ossicles in aural catarrh; but he has reported the two cases after having satisfied himself of the applicability of the method. He believes that there are only a few chronic conditions in the tympanic cavity, in which excision of the ossicles will produce permanent results; and the operations ought to be limited to the prevention of a progression of the disease, or for cases of insufferable tinnitus, so that even an otologist commanding a very large material will not find occasion to operate many cases. As to the technique, he thought that the extra-auricular (Stacke's) method was just as advisable, if not preferable, to the intra-auricular procedure. However, wholesale excision of the ossicles should be condemned.

Dr. Bishop, closing the discussion, said that he did not often insert a drainage tube in the wound of the mastoid operation. The superficial opening is maintained by a pledget of iodoform gauze, until the wound heals from the bottom to the opening of the bone. After Stacke's operation he has been in the habit of using a hard rubber tube in the auditory canal for one day, followed by a soft rubber tube for a few days. In regard to the removal of the drumhead and ossicles for dry catarrh of the middle ear, he had become exceedingly cautious. Four cases had come to his knowledge, in all of which the results were so disastrous as to deter him from operating for this disease. In one instance the operation was followed by total deafness in the operated ear, suppuration and vertigo. In another the tinnitus aurium increased greatly after the operation. In suppuration and necrotic processes he did not hesitate to remove the ossicles.

THE PHONOGRAPH IN THE TREATMENT OF DEAFNESS,

by Dr. Johnson Eliot, Washington, D. C.

The Edison phonograph is capable of producing the vibrations composing sound, those falling upon the membrana tympani are considered as feeble blows (tapotement) causing passive motion of the ossicles. Could the action be confined to the middle ear the treatment would be productive of good results, but this is impossible, as any vibration is carried through the ossicular chain to the endolymph. When the ordinary voice sounds as recorded by the phonograph were used the tympanic muscles would soon become fatigued. The labyrinth is protected from sounds of large volume by the yielding of the membraneous walls, and a special valve, the membrana tympani secondaria.

In chronic catarrhal otitis media the lining membrane is in a sclerosed condition and the valve action is greatly interfered with. Where these conditions are present the vibrations are thrown back on Corti's organs which are over-stimulated. In thirteen cases reported the treatment was given about every third day for periods varying from one to seven months. In but one case did the tinnitus abate, and this for a day when it returned. None of the cases improved in condition. In one case "nervous prostration" occurred in the course of treatment. In some a slight giving away of the adhesion was noticed.

CLINICAL CONTRIBUTION TO THE STUDY OF AURAL SYPHILIS,

by Dr. Max Toeplitz, of New York.

Report of a case in which the labyrinth was affected primarily in the course of a freshly acquired syphilis, and in which the aural affection began simultaneously with the appearance of roseola. The special features of this case are: 1, The affection of the labyrinth occurred after the appearance of the pharyngeal mucous patches. 2, The aural lesion took place during the secondary stage, and without attacking the middle ear. 3, The diagnosis of syphilis was made from the ear. The case improved under anti-syphilitic treatment.

THE PRESENT CONDITION OF OTOLOGY IN EUROPE,

by Dr. Laurence Turnbull, of Philadelphia.

In the first part of this paper the author relates his observations in the otological clinics of Europe during a visit in 1892 and 1893. He compared the present position of otology with that of twenty years ago, and found everywhere a more perfect knowledge of the normal, pathological and microscopic anatomy of the ear, both in men and animals. With this precise knowledge of anatomy there followed a more rational use of therapeutics both in their local and general application. Definite operative and mechanical methods of treatment, with perfect illumination by gas or electricity, are the general rule nowadays. The old empirical use of the syringe with hot alkaline solutions, without looking into the ear, has, among general practitioners, entirely disappeared. An important union has taken place between the laryngologist, rhinologist, and the otologist, which happy combination was well illustrated at the meeting of the British Laryngological and Rhinological Association, and at the Section of Otology and Laryngology at the meeting of the British Medical Association, at Nottingham, 1892. The author then continues to describe the methods, as practiced at present by the representative otologists of Great Britain, Germany, Austria, Belgium and France.

The second part of his paper has the separate title:

THE OPERATION OF EXCISION OF THE OSSICLES IN CHRONIC SUPPURATIVE, OR NON-SUPPURATIVE (PROGRESSIVE SCLEROSIS OR PROLIFEROUS) DISEASE OF THE MIDDLE EAR: WITH CASES.

In chronic suppurative disease of the middle ear, after all ordinary measures have failed, the excision of the membrana tympani and ossicles is resorted to for relief or cure of carious necrosed bone, or diseased tissues causing mechanical obstruction to the entrance of sound, and is now a well established rule of practice, as well as a decided advance in aural surgery.

The operation of 'otosclerectomy,' or the surgical removal of all or part of the sclerosed and anchylosed conductors of sound in non-suppurative or chronic middle ear inflammation has received the sanction of the aurists of the United States and of many in Germany, for properly selected cases. Failures may and do occur, as well in the hands of the tyro as in those of experts. In properly selected cases the author has had good success, when he found a patient with the obstruction anywhere between the thickening and adhesions of the membrana tympani, anchylosis of the malleus with the incus. It is almost always necessary to perform a preliminary operation by a removal of an oval piece of the drum with the malleus. When we find that this opening improves the hearing, or relieves the tinnitus and vertigo, the operation has to be completed by removing the incus.

In dry progressive sclerosis an incision in the membrana tympani posteriorly to the malleus, followed by traction on the incudo-stapedial joint has been advised. If this fails in removing the annoying symptoms, it will be safe to excise the membrana tympani and the ossicles. By this operation the author succeeded in stopping sclerosis. Some illustrative cases are reported. The following is the most interesting: A lady, æt. 46, was profoundly deaf from otitis media catarrh, chronic, of many years duration. There was in the right ear thickening of the membrana tympani, the handle attached to the promontory, and the whole malleus twisted on its axis. Eustachian tubes patulous. H. pressed contract. Tuning fork full C, auditory nerve normal, bone conduction good. Excessive tinnitus. The left ear was in similar condition. The operation was performed, chloroform and ether being used, Feb. 5th, 1892. The malleo-incudal joint was firmly anchylosed. The membrana tympani and part of the malleus were removed, though the operation was attended with some difficulty on account of the ensuing hemorrhage. The hearing was greatly improved after the operation, and continued so that she could hear an ordinary voice; the tinnitus had decreased. June 1893 hearing continued perfect in the ear operated upon; a new membrane had formed.

In these operations it has not always been found necessary to remove the incus and stapes. Also in cases of severe pain in the ear of an obscure nature with a dreadful feeling of pressure, much relief, of a permanent character, has been afforded the patients by opening the drum and disarticulating the malleus. Cases accompanied with atrophy or paralysis of the auditory nerve should not be operated upon. Great care must be taken not to injure the Fallopian canal with the incus hook. Children can be operated upon, and even old men have had their hearing restored for ordinary conversation, also experiencing great relief from tinnitus and vertigo. Accidents are liable to occur, but much can be done to prevent them. No death is known to the author to have followed the operation, but cases have been reported where the hearing power has been made worse.

Discussion by Drs. Thorner, Hobby, Maloney and the author.

DESCRIPTION AND DEMONSTRATION OF FOCUSSING EAR TRUMPET,

by Dr. Edmund D. Spear, of Boston, Mass.

As the cone-shaped tubes are best suited for collecting sound-waves for transmission into the ear, one of this form has been chosen to illustrate my design for a Focussing Ear Trumpet. A tube of moderate length for convenience in handling has been taken. At the apex of the cone is attached a short tube of a diameter larger than that of the average sized auditory canal Within this tube, which is made simply as a support, another tube, one end of which is curved, is fitted so as to move in and out. At the other extremity of this tube is fitted a short cone. As the capacity of the longer tube is limited by the various lengths of the columns of air within it, which act as resonators, the power of any given cone is practically fixed. In Williams' ear trumpet the capacity of a given cone is increased by cutting away a portion of one of its sides. In any instrument of this description the capacity of a given cone is increased by cutting away a portion of one of its sides. In any instrument of this description the capacity is likewise limited. It is possible, however, to vary within definite limits, though this has not been decided upon, the capacity of both forms of cone by means of my sliding tube with its funnel-shaped extremity. (Two instruments, a portable and a stationary one, were exhibited).

Dr. E. Dean, of Scranton, Pa., exhibited a set of

INSTRUMENTS FOR THE APPLICATION OF THE GALVANIC CURRENT TO THE ORIFICE OF THE EUSTACHIAN TUBE.

Dr. R. D. Barret, of St. Louis, Mo., had on exhibition

AN IMPROVED MIDDLE EAR POWDER BLOWER,

the essential feature of which is that it requires but one hand to introduce the mouth piece (a Hartmann intra-tympanic canula) and to work the bulb, the capsule containing the powder being immovably fixed between it and the canula. The instrument is moreover steadied by the thumb of the same hand introduced into a ring which is attached to the lower surface of the powder capsule.

ADENOIDS, A CONTRIBUTIVE FACTOR IN AURAL AFFECTIONS,

by Dr. M. D. Lederman, of New York.

The recurrence of the suppurative process in middle ear disease observed in children is so evidently due to the presence of these growths, that their thorough removal should be our first effort. If the patient is suffering from acute symptoms, we must delay such surgical interference until same have subsided. It matters not if this obstructing mass produces the inflammatory state by direct continuity or by inhibiting the action of the levator palati muscles, thus interfering with the proper æration of the Eustachian tube and middle ear, or whether the circulatory apparatus is influenced by the pressure exerted upon the pharyngeal veins. The knowledge that these growths are an exciting factor is sufficient evidence to urge their prompt removal. The usual method of treating the incessant discharge by irrigation and insufflations of boracic acid, thus allowing the possible absorption of the tympanic membrane and ossicles is, to say the least, a most faulty practice. If we would introduce our finger into the pharyngeal vault of young patients, suffering from these frequent purulent attacks, in the large majority of cases it would not be necessary to seek further for their origin. When a child suffering from ear disease, be it of the catarrhal or purulent variety, is a subject of adenoids, we may safely offer a favorable prognosis, providing the removal of the hypertrophied tissue can be thoroughly performed. Unless all the lymphatic tissue is ablated (and this can be readily ascertained by the introduction of the finger into the pharyngeal space), the desired results are not forthcoming. By ridding the patient of this overgrown tonsil, we not only benefit the aural complication, but materially influence the general system as well. The symptoms of mouth-breathing, restlessness at night, dull expression of face, nocturnal enuresis, are all relieved by abstracting the exciting lesion. We must not anticipate an immediate cessation of the offensive aural discharge, as it takes a few days and sometimes weeks for its final disappearance. However, some cases respond so quickly to the treatment that we are at times agreeably surprised. The instrument which has given me most satisfaction in their removal is the modified heart-shaped Gottstein curette, together with Lõwenberg's post-nasal forceps improved by Dr. Gleitsmann.

Discussion by Dr. T. V. Fitzpatrick.

CRANIOMETRIC MEASUREMENT OF 500 SKULLS IN RELATION TO AURAL TOPOGRAPHIC ANATOMY,

by Dr. B. Alex. Randall, of Philadelphia, Pa.

The author has examined 500 skulls, with the aid of specially constructed calipers, in order to ascertain whether a certain relation of aural topography to the form of the skull could be established, especially in reference to the method of opening the mastoid. The result of his elaborate studies in this direction, elucidated by the detailed account of his measurements, is that, while not sufficiently extensive to be conclusive, they certainly show that the cranial index gives little pointing as to the anatomical relations likely to be met by the operator; and they prove that maximal or minimal dimensions may be encountered in any type of skull.

In the course of this meeting on motion of Dr. Laurence Turnbull, Professor A. Politzer was unanimously elected Honorary President of the Section on Otology of the first Pan-American Medical Congress.

Homœopathists as Vivisectors.

"Can this be true?" one is tempted to exclaim on reading that in America a homœopathic medicine is obtained from the common toad in the following way: "The live animal is fastened to a slab of cork by four strong pins stuck through the webs of the feet. Then the poles of an induction apparatus, in action, are slowly drawn over the back of the animal, whereupon the poison very soon issues from the dorsal glands. This is removed with a small horn knife and triturated—in the proportion of 1 part to 1,000 parts of sugar of milk." So the secretion from our old friend *bufo* is really a poison, and, wonder of wonders, also medicinal. Besides this extraordinary remedy the modern American homœopathist uses a number of equally nasty tissues and products. Surely if these curious medicaments have any scientific value, there should be no great difficulty in proving their virtues in these days of exact scientific research and experiment. What would Hahnemann say, one marvels, could he come back and see his disciples, modified by evolution, dosing their patients with the bile of the common fox? *Similia similibus curantur.* These eccentric pharmacists might possibly find some useful extractives in the body of anser domesticus, or the common farmyard goose—*Med. Press and Circular.*

Decline in the Consumption of Liquor.

Statistics are presented in Dr. Gould's report showing that since 1874, when the retail trade was accorded to the Gothenburg Brandy Company, the consumption of liquor has steadily declined in its district. In 1875 the consumption per inhabitant at bar trade places was $11\frac{3}{10}$ quarts per annum. In 1882 it was $5\frac{1}{10}$ quarts. In like manner the brandy bought at retail places fell from $15\frac{3}{10}$ quarts in 1875 to $8\frac{1}{10}$ quarts in 1892. The higher grade spirits also show a diminution. In 1875 the consumption was $2\frac{3}{5}$ quarts, in 1892, $1\frac{1}{10}$. The quarts per inhabitant was 29 in 1875; seventeen years later it reached low water mark at $14\frac{4}{10}$ quarts. During this period the prices of liquor advanced from $1\frac{1}{2}$ cents for a glass of brandy containing 47 per cent. alcohol to $2\frac{1}{4}$ cents for a glass containing 44 per cent. alcohol. These statistics do not include the amount disposed of by sub-licensees.

Clinical Records

Doctor (who has been asked to see an ill-developed infant): "What food do you give it?" Mother: "Nawthin'." Doctor: "But it must have some food to live upon. Do you mean to say that you give it nothing?" Mother: "No; it ain't 'ad nawthin'." Doctor: "What! nothing at all?" Mother: "No; nawthin'." Doctor: "Don't you give it any milk?" Mother: "Oh yes; I gives it some milk!" Doctor: "Then why do you say it has nothing?" Mother: "I didn't know what you meant." Doctor: "Do you give it anything besides milk?" Mother: "No; nawthin'." Doctor: "No bread?" Mother: "Yes; I gives it sopped bread." Doctor: anything else at all?" Mother: "No; nawthin' else." Doctor: "I suppose when you have your meals it gets something off the table?" Mother: "Oh yes; it picks a bit of meat and wegetables and such like when we gets our dinner."

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SATURDAY, NOVEMBER 18, 1893.

EDITORIAL.

LOCAL MEDICAL SOCIETIES.

The most important factor in the progress of modern medicine is the facility for the interchange of ideas and experiences afforded researchers and clinicians. The periodical meetings of state, national and international associations are symposia of workers in every department of medical science, and the records of these meetings are the most reliable bulletins of current work. Natural conditions render these conferences inaccessible to the every-day practitioner. They deal with abstract conditions, while he is compelled to struggle with the concrete and has little time to theorize in his continual conflict with disease and death. In dealing with general conditions a vast amount of practical information that would prove invaluable in every day experience, is buried out of sight in the vast accumulation of material.

'Congresses' are but meetings of 'associations;' 'associations' are but meetings of 'societies;' societies are but meetings of individuals. And though one may never attend the annual meetings of the state or national medical associations it is of vital importance, both to the individual and the profession at large, that the attendance at the meetings of the numerous local societies should be both regular and generous. By these meetings an *esprit de corps* is kept up that of itself is worth all the outlay of time and money expended in that direction. There are benefits innumerable both given and received at such gatherings.

Social intercourse and kindly feeling, for a time at least, take the place of that professional jealousy which so often mars the daily life and embitters the feelings of neighboring practitioners who under other circumstances would be the best of friends. The good feeling engendered and the thorough knowledge of each other obtained by this meeting together for mutual improvement, prevents the encouragement of suits for malpractice which so frequently spring from the avarice of charity patients, the mendacity of rival practitioners and the greed of mercenary shysters who are hanging on to the ragged edge of the legal profession in a chronic process of slow starvation.

In union there is strength. When trouble of any kind does befall a reputable physician, if the profession is bound together as it should be where the local associations are strong, no injustice will be done the unfortunate pursued by greed and persecuted by legal chicanery. Malpractice suits are almost universally unjust combinations between a dishonest client and a dishonorable lawyer to steal something from a physician who has excited their cupidity by his seeming prosperity; and these unholy combinations of evil most frequently occur where the profession is divided and some doctor, fuller of hate than of wisdom, can be induced to lend a helping hand in the effort to destroy a brother.

This feature of mutual help and protection is of great importance to the individuals who are exposed to the various pitfalls that waylay the average doctor, yet there are many benefits conferred by professional communion that accrue as much to those who receive as to those who apply the ministrations of the healing art.

General practitioners as a rule, and especially general practitioners in the country, take and read but few journals. Even if they buy a great many new books the later and fresher ideas and recognized truths in medicine will become old before they receive them at all.

Meeting together in the pursuit of the latest and best things in their calling will sharpen the appetite for scientific knowledge, and when each contributes to the common fund his new acquisitions of fact and theory, there will not be so very much in the possession of the most advanced that does not find itself at home among the ranks and file.

There is much to be gained by the exchange of thought that takes place when cases are reported for discussion. One may reflect long and anxiously upon the difficult or startling cases that meet him in his daily rounds, but when he draws out the ideas and the experiences of his brethren, the very multiplicity of analogous cases with the resulting parallelism of thought banishes doubt and forbids hesitation in reaching conclusions. Hence the experience of one becomes a teacher for many and a fertility of resource, a readiness in applying methods or selecting remedies comes to all. Such conditions bring most satisfactory results and confidence born of success comes alike to doctor and patient.

The spirit of investigation may exist in solitude, but it does not often prolong its flight nor scour wide fields in seeking a solution of problems either old or new. When the emulation of contact and the stimulous of sympathy are added to the spur of necessity and the enticements of ambition, mysteries may become clear and the barest domain of science may be enriched by the conquests of the humblest.

It is not in the field of professional investigation and experience alone that an attendance on his local society brings improvement to the devotee of Æsculapius. The mere act of observing, recording and detailing ones experience develops the mind in several directions, while the discussion of questions as they arise teaches habits of rapid and connected thought and gives ability to think and talk in the presence of a crowd. In other words it often makes a medical nestor of one who otherwise would remain a mute inglorious Milton.

"Van Gilding is quite a leader of fashion, isn't he?"

"H-m-well, he hasn't had appendicitis!"

TRANSLATIONS.

THERAPEUTIC HINTS FROM FOREIGN JOURNALS.

IN CHARGE OF THE TRANSLATOR, F. H. PRITCHARD, M. D.

SUPPOSITORIES FOR ACUTE ARTICULAR RHEUMATISM.

Dr. Lemanski (*La Semaine Medicale,* No. 58, 1893), speaks highly of the following suppositories in the treatment of acute articular rheumatism:

℞ Salicylate of Soda............1 gm. (grs. xv).
Butter of Cacao...............Q. S.

Sufficient for one suppository. Make twelve such suppositories and introduce from five to six daily. This method of administering the salicylate is much more convenient than the rectal injections recently praised by a German writer, Erlanger.

ECZEMA OF THE EAR AND EXTERNAL AUDITORY CANAL.

Prof. Gruber (*Archives de Ginecologia y Pediatria,* No. 25, 1893), recommends the following treatment of eczema of the ear and external auditory canal:

Apply a compress of cotton soaked in glycerine.

For external use he also employs:

℞ Glycerine.......................50 gms. (℥jss).
Sulphate of Zinc...............75 cgms. (ʒ1¼).

This formula is of service in humid eczema.

The following is also excellent:

℞ Cod-liver Oil.....................50 gms. (℥jss).
Metallic Iodine...................5 cgms. (gr.j).

He also gives to weak and debilitated children the iodides, iron, etc., internally.

Locally the following salve may be used:

℞ Red Precipitate..............25 cgms. (grs. iv).
Simple Unguent.............10 gms. (ʒijss).

Apply to the ear upon a compress or a piece of cloth.

Diachylon ointment he also uses in the same manner as the above.

STRYCHNINE IN NERVOUS VOMITING.

Dr. H. Smith (*La Semaine Medicale,* No. 58, 1893), employed strychnine in a patient exhausted with malaria and suffering with rebellious vomiting which had resisted all treatment and rendered taking nourishment almost impossible. He thereby obtained a notable diminution of the vomiting in the first twenty-four hours and, finally, its complete disappearance. Since then he has used it in vomiting, in various forms, from nervous exhaustion and has always obtained good results.

DUBOISINE SULPHATE AS A SEDATIVE.

Prof. Albertoni (*Therapeutische Monatasschrift,* No. 8, 1893), has used duboisine sulphate as a sedative in hystero-epilepsy. In three cases the attacks ceased after an injection of four to five decimilligrams, and, after a further injection, disappeared entirely. Prof. Rabow, who has had extensive experience with the remedy, states that in agitated maniacs, almost without exception, one may obtain quiet and sleep with this remedy. One-half to one mgm. ($\frac{1}{128}$–$\frac{1}{64}$ gr.), suffices as a sedative and two mgms. ($\frac{1}{32}$ gr.) as a hypnotic. Two mgms. ($\frac{1}{32}$ gr.) of the drug he has found equal to two grams, (15 grs.) of chloral hydrate. Unfortunately, the patients soon become accustomed to the drug, though after discontinuing it for several• days it may be again used. Sometimes he has employed it in combination with chloral, in doses of two grams of the latter and one mgm. ($\frac{1}{64}$ gr.) of the former, and with good results. He does not recommend it any more than he does hyoscine as a hypnotic, for, too large doses are necessary. It is not superior to other hypnotics. Its sleep is not refreshing, for, after awakening, the patients feel weary and exhausted. Yet, as a sedative, he gives it a prominent place where excited insane are to be quieted. Here it yields rapid and good results. Raging maniacs may be quieted with a very small dose and kept in bed. Isolation is rarely necessary. One-half to one mgm. will suffice as a rule. Only exceptionally did he have recourse to hypodermic injection.

Internally and hypodermically a watery solution, in the following formula, was employed:

℞	Duboisine Sulphate............	1 cgm. (gr. 1-5).
	Distilled Water..................	10 gms. (ʒijss).

Administer at the first dose twelve to fifteen drops internally, and, subcutaneously, half a syringeful. The remedy, which is tasteless, was mostly taken without difficulty. Its action became manifest after half an hour. Often the patients would complain of feeling weak in their legs, of being weary and having a sensation in their head as if they had drunk too much wine. Then they would sit down, become quiet and sleepy, sometimes sleeping half an hour or longer. On waking they complained of dryness of the throat and of thirst. In the majority of cases the pupils were greatly dilated, the pulse increased, or reduced, in frequency. The respiration and temperature were not materially affected. He never employed more than two mgms. (½ gr.). As disagreeable after-effects he has now and then noticed diminished appetite, headache, vertigo and, once, vomiting. A directly favorable influence upon the psychic process he did not notice in a single case. Neither in mania, melancholia nor paranoia was the character of the disease altered. Only in intercurrent conditions of excitement did he now and then get the impression that by a rightly timed dose of duboisine was the attack suppressed.

CHLORIDE OF AMMONIA IN CYSTITIS.

Dr. G. Corrie (*La Semaine Medicale*, No. 58, 1893), recommends the chloride of ammonia as superior to all other remedies in the treatment of cystitis of various origin. Under the influence of this drug, in doses of one or two grams (15 to 30 grains) he has observed, in cases of cystitis, the urine clear up and all the morbid symptoms disappear with surprising rapidity. It may be used in still greater doses without inconvenience and in none of his cases did he observe any disagreeable symptoms from its use.

HEMPOTYSIS.

Dr. Blaschko (*Norsk Magazin for Laegevi denskaben*, No. 10, 1893), employs the following mixture in hemoptysis:

℞	Gallotannic Acid	
	Ergotine, āā...........	1 gm. (grs. xv.)
	Destilled Water........	
	Syrup āā................	25 gms. (ʒvj).

A teaspoonful every hour.

Where there is great inclination to cough he employs the syrup of opium instead of the simple syrup. Where the hemorrhage is profuse he gives a teaspoonful every hour. He regards it as very reliable and superior to injections of ergotine which are prone to cause suppuration at the place of injection, or to ice-bags to the chest, which only increase the cough.

HYSTERIA.

The following formula is spoken of highly in the *Raccoglitor Medico*, No. 8, 1893, in the treatment of hysteria:

℞	Monobromate of Camphor......	3 gms. (grs. xlv).
	Extract of Quassia..............	2 gms. (grs. xxx).
	Syrup of Belladonna............	6 gms. (ʒjss).

Sufficient for thirty pills.

One to three per diem.

This formula is also recommended in chorea.

A CHEMICAL ANTIDOTE FOR CYANIDE OF POTASH.

Dr. Julius Kossa (*Wiener Medizinische Presse*, No. 41, 1863), has made investigations in the Pharmacological Institute of Buda-Pest, with regard to discovering a chemical antidote to the cyanide of potash. Hydrocyanic acid and its salts as a rule cause death so quickly that there is rarely time to administer an antidote. But there are cases of poisoning by bitter almonds, (weak solutions of the cyanides) where an antidote may be given. Atropine has been recommended, but it is rejected by the majority of writers. Peroxide of hydrogen has been suggested by Krohl, but it is so unstable and at the same time by no means indifferent. Kossa experimented with the permanganate of potash and found that they act very powerfully upon each other in the test-tube. Solutions of the cyanide lose their color due to an oxydation. Experiments on animals confirmed expectations, for animals to which the permanganate was given lived after ten times the deadly dose of the cyanide. The oil of bitter almonds and hydrocyanic acid yielded the same results, so that he can recommend it as a certain antidote to the acid and its compounds. In case of poisoning give from a third to a half litre of a 5 per cent solution of the permanganate as soon as possible.

TREATMENT OF ECLAMPSIA BY MORPHINE.

Dr. Kranz, (*Wiener Medizinische Presse*, No. 41, 1893), in an inaugural dissertation on the treatment of eclampsia of pregnancy and labor by morphine, claims to have employed this drug in seventeen cases with but two deaths. In these two cases the fatal termination was due to other complications which were previously present: rupture of the uterus, mitral insufficiency with nephritis. The inhibitory influence of morphine upon the attacks was very prompt, for, in several cases after administering a single dose of three cgms. (one-half grain), the attacks were definitely suppressed. In other cases the total quantity of morphine used was one grain and a quarter, in nine hours. In one case nearly one grain and a half was given in two hours and a half. Out of the seventeen cases the children were born dead in four, and in two of these the influence of the morphine could be excluded.

TREATMENT OF BURNS BY SUBNITRATE OF BISMUTH.

Dr. Osthoff (*La Semaine Mèdicale*, No. 58, 1893), recommends treating burns by application of a thick paste of the subnitrate of bismuth and boiled water. This method of treatment he has tried in a large number of patients and he finds it more convenient than the use of the dry powder of the subnitrate, which has recently been recommended by German writers. After having removed with scissors, the loose shreds of epidermis, he covers all the burned surface with a paste of the subnitrate. In drying, this paste forms a thick crust which may be left in place until the burn heals, covering the cracks and fissures that form with new paste. Burns of the second degree, of great extent, heal under this dressing in ten to fifteen days. The portions that have become covered with scars, he dresses ewith antiseptics incorporated in paraffin, to make the application as consistent as possible. If too exuberant granulations form, he reduces them by salves of the nitrate of silver, the sulphate of zinc or the balsam of Peru.

RECTAL INJECTIONS OF A SALT WATER SOLUTION IN ACUTE ANEMIA.

Dr. Warman, (*Muenchener Medical Wochenschrift*, No. 40, 1893), has employed rectal injections of a solution of salt water, six parts to one thousand, in a series of cases of grave anemia during labor, with excellent results. This method of procedure is much easier to carry out than the hypodermic, or, especially, the intra-venous, injection of these solutions, on account of the difficulty of assuring asepsis, and, in addition, the surface of the mucous membrane being quite extensive, absorption takes place more rapidly. He thinks that absorption is complete in four and a-half minutes, for there always appeared, within this time, the symptoms of elevation of temperature, the pulse improved and respiration and the general condition became better. Peculiarly enough improvement set in most rapidly when not warm water but cold, was employed in the injections—vaso-motor reflex excitement. Inject slowly with the patient upon the left side, and with but slight pressure. He employed this method in twenty-eight cases where there was profuse hemorrhage after normal labors or abortions, and with good results in twenty-seven. It is indicated in hemorrhages from other organs, except in those of typhoid fever where it might sweep off the crusts already formed upon the ulcers.

In a case of dangerous vomiting and diarrhœa from eating decayed food, his method was used with good results.

CONSTIPATION IN DYSPEPTICS.

In *Le Progrès Médicale*, No. 39, the following formula is recommended in the constipation of dyspeptics:

℞

Colocynthine..........	10 mgm. (gr. 1-5).
Powdered Belladonna.	5 cgms. (gr. j).
Bread Crumbs.........	Q. S.

Sufficient for ten granules.
Two granules after each meal.

SALICYLIC ACID AS A PALLIATIVE IN CANCER OF THE UTERUS.

Dr. F. Bernhardt, (*La Semaine Médicale*, No. 58, 1893), knowing that salicylic acid had a particular affinity for epithelial tissues, tried it in inoperable cancers of the cervix uteri, by subcutaneous injection into the thickness of the growth. He employed the following formula:

℞

Salicylic Acid............	3 gms. (grs. xv).
Alcohol (60 per cent).....	50 gms.(℥ jss).

One may inject by means of a syringe holding thirty drops, with a needle following the axis of the vagina, a few drops into seven to ten places in the tumor. The total quantity injected at one sitting should never exceed thirty drops. He has employed this method in five patients and in all these cases the results were excellent. The hemorrhages and fetid discharges disappeared, the general condition improved considerably, the cancerous tumor diminished in volume and the ulcerations upon its surface cicatrized. The pain caused by the injection varied from very slight to that of such intensity as to make the patient cry out. The first injection may be followed by increase of the pains and discharge, but this is of short duration.

NAPHTHALINE AS A TAPE-WORM REMEDY.

The following, (*Le Progrès Médicale*, No. 38, 1893), preparations of naphthaline are recommended as expellers of tapeworms:

In children:

℞

Naphthaline.......	30-50 cgms. (grs. v-viij).
Castor Oil.......	15 gms. (℥ iv).
Essence of Bergamot	gtts. ij.

To be taken at one time, fasting.

In adults:

℞

Naphthaline...........	1 gm. (grs. xv).

To be taken in one powder and followed immediately by 40 gms. (an ounce and a quarter) of castor oil.

SALICYLIC ACID SALVE IN ACUTE RHEUMATISM.

Dr. Bourget (*Medicinische Neuigketten* No. 32, 1893) has made a long series of experiments on the absorption of salicylic acid when employed in the form of a salve in acute articular rheumatism. He simply rubs the joints with the ungent and applies over it a flannel bandage. Out of a large number he has found the following formula the best:

℞

Salicylic Acid.......................	
Lanoline	
Essense of Turpentine, ana.......	10 gms. (ʒijss).
Lard	80 gms. (℥ijss).

Within half an hour after application a strong reaction of the acid may be detected in the urine.

For ten years he has treated all his cases of acute articular rheumatism with this salve, without giving the drug internally and with the best of results. Pain ceases within a few hours, the swelling diminishes from the second day, the fever disappears completely between the third and fifth day and, finally, none of the disagreeable side symptoms are observed which are often associated with its internal administration.

ABSTRACTS.

THE IRRUPTION OF "CRANKS."

Asylums for the insane everywhere are crowded to overflowing, but evidently they do not contain all who should be within their walls. The irruption of "cranks" that has followed the assassination of Mayor Harrison by one of the ilk shows that the outside world is still uncomfortably peopled with the insane; for most of these cranks belong plainly to the form of insanity which the alienist terms paranoia—the most subtle, to a layman the most inscrutable, one of the commonest, and by far the most dangerous of mental maladies. Of a sudden these cranks seem to have sprung up like mushrooms everywhere. Yesterday not a paranoiac in sight; to-day you may stumble upon one anywhere. What does it mean?

It means not so much that the cranks have been given a new impetus, as that the sane portion of the community is momentarily alive to their presence. Of course cranks, like other people, do copy after one another, and when one has achieved notoriety by a conspicuous crime, others will emulate his example. But quite independently of any such impetus, the cranks are constantly abroad in the land, perpetrating outrageous deeds hourly. They harass or threaten or amuse their fellow-beings, or as their mood changes, even shoot them, without exciting especial comment, until the victim chances to be a Mary Anderson or a Dr. Hall, or Russel Sage or Carter Harrison, and then the whole world gives expectant attention, and the hosts of cranks who have been hounding lesser lights unnoticed are suddenly thrust into view. And a general cry goes up, "Why are these lunatics allowed at large?

The question is pertinent, and fortunately the answer is easy. Dangerous paranoiacs are allowed at large because the public, except in momentary spasms of fear following upon some great tragedy, prefers that they should be at large. It is difficult to keep them in asylums, where they belong, simply because it is easy to find juries that will release them on writs of habeas corpus. Alienists may commit them to asylums; asylum superintendents may receive them there; but both are powerless before a writ of habeas corpus and a sheriff's jury. Any one may swear out the writ, and almost any jury may be depended upon to pronounce the patient sane and competent if his case be not one of actual raving mania. Then people and press will applaud, and it is heralded forth that a "sane man has been rescued from the living tomb of a mad-house." Suits for damages will perhaps follow, and the alienists concerned will be held up to public opprobrium for their iniquitous attempt upon the liberty of a fellow-being. It will seem to occur to no one that the jury, composed of laymen who confessedly know nothing about insanity, might be mistaken, and the half-dozen alienists who have made insanity a life study might still be in the right. A case of the kind occurred so recently in New York that it must be in everybody's mind. Does any one recall a newspaper comment that questioned the verdict of the jury? On the contrary, even the least sensational of journals pointed the editorial finger scornfully at the alienists and asked with crushing sarcasm what they thought of themselves now? Not so very long ago a paranoiac released by a jury from an asylum marched home and shot his sister. Did any one think to call upon the jury for its opinion of itself *now?*

Of course it may be said that Prendergast had never been released from an asylum in this way, having never been committed to one. But he belongs plainly to the class of insane persons who are most frequently so released. He ought to have been committed to an asylum long ago, and very likely he would have been had not alienists learned through experience to fight shy of cases of the kind, which are almost certain to bring them nothing but abuse. Chicago's sad tragedy is made all the sadder by the thought that it might so easily have been prevented. It is well, therefore, to look beyond the crank who committed the crime to the causes that operated to give him such dangerous liberty. It boots little to argue now *pro* and *con* as to the "responsibility" of Prendergast. It matters not what becomes of him, provided he is never again allowed to be at large. But the real responsibility, lying with the populace rather than with the individual, may well be seriously considered. For the moment the lesson is clear to every one. There will be a great shutting up of paranoiacs for a time. But if we may judge from the experiences of the past, most of them will presently be released again, and forgotten until the next series of tragedies brings them once more to view.—*Harper's Weekly.*

Common Mistakes of Doctors.

1. To allow yourself to be agitated by the criticisms or praises of the patient's friends.

2. To allow yourself to make a display of your instruments.

11. To allow yourself to experiment or exhibit your skill uncalled for.

3. To allow yourself by look or action in a consultation to show that you are displeased, and that if you had been called first matters would have been different.

4. To allow yourself to indulge in intoxicating beverages.

5. To allow yourself to rely wholly upon the subjective symptoms for your diagnosis.—*Dietetic Gazette.*

THE LIBRARY TABLE.

BOOK REVIEWS.

The Theory and Practice of Medicine Prepared for Students and Practitioners. By James T. Whittaker, M. D., LL.D., Professor of the Theory and Practice of Medicine in the Medical College of Ohio; Lecturer on Clinical Medicine at the Good Samaritan Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, of the American Academy of Medicine, and of the American Medical Association. With a Chromo-Lithographic Plate and three hundred Engravings. Octavo, 840 pages; more than three hundred Engravings and one Chromo-Lithographic Plate. Extra muslin, price, $5.7 ; leather, price, $6.50. New York: William Wood & Company.

When a man like Prof. James T. Whittaker essays a practice of medicine, we naturally have confidence to believe that his effort will be productive of much that is valuable to the general practitioner, and that all the latest ideas evolved from patient research during the past decade, will be incorporated.

The present volume quite fulfills our expectations, as it is a treatise not only up to date in its teachings, but rather ahead of the profession at large. The general scheme of the book is a good one—he divides the material into two parts: the first on *General Diseases*, and the second on *Diseases of Organs*. The first sixty-seven pages are devoted to the subject of *parasites*, which he divides first into *Ectozoa*, or those found upon the surface of the body, including a discussion of most of the skin diseases—and second, *Entozoa*, or worms in the intestinal canal. His elaboration of the ectozoa is so complete that even the bedbug (*cimex lectularis*) and mosquito do not escape notice.

The chapter on entozoa is very full and well illustrated, and includes a description of the rarer forms of intestinal parasites, such as the filaria medinensis or guinea worm of Asia and Africa; the distoma hepaticum, or liver fluke, and distoma hematobium of Egypt and Abyssinia.

Then follows the great effort of the volume, which is the consideration of the various infections occupying about three hundred pages. In the preface the author says "The most work has been put upon the infections, as the most frequent and dangerous, and at the same time, the most preventable of all diseases."

About one-twelfth of the volume is abstracted from his articles in "Wood's Reference Hand-book," Pepper's System of Medicine," "Hare's Therapeutics," and "Pepper's American text-book." A special feature of the book is that the author goes into the history of the different diseases, and recognizing that preventive medicine is to be the medicine of the future, the prophylaxis of disease holds a position of no inconsiderable importance.

The infectious diseases are illustrated by the specific, pathogenic microbes, and each is fully described.

The treatment of croupous pneumonia by the hypodermic injection of immunized serum, as well as by cold baths, shows the author is up to date in treatment.

He disbelieves the theory of inherited phthisis, and further is convinced that the prevention of tuberculosis depends upon the destruction of sputum and the sterilization of milk,—"all else is trivial."

A good feature of the work is that the etymology of diseases is given.

Fevers are illustrated by characteristic temperature charts.

This classification of certain diseases is somewhat unique, as for instance, under the head of infectious diseases he includes acute rheumatism, while gout is classified as a disease of the blood.

Catarrhal pneumonia is discussed under diseases of the lungs, but *croupons* pneunomia with the infections fevers.

In the chapter on diseases of the stomach, he objects to the term dyspepsia, and classifies all forms of gastric indigestion under the heading of gastric catarrh.

He is a thorough believer in treating chronic stomach troubles, by lavage, and considers this proceedure of special aid in differential diagnosis.

Dilatation of the stomach is discussed under the name of *gastrectasia* and the author is a strong advocate of the use of the galvanic current for gastralgia.

The chapter on diseases of the lungs is very thorough, and includes a full dissertation on resuscitation from drowning.

Under the title of *pneumonoconiosis* are discussed those diseases produced by the inhalation of dust, including anthracosis, siderosis, chalicosis, etc.

Contrary to the usual custom, skin diseases occupy the first part of the book.

In thoracic affections, some of the rarer conditions, not found in most books, are described, such as peripleuritic abscess (which he believes to be due in most cases to the invasion of actinomyces), subphrenic abscess, and bronchitis putrida. Tetany, he is inclined to believe, is a toxæmia.

We note the absence of any discussion upon the subjects of ephemeral and simple continued fevers and dengue. No mention is made of pancreatic disease and splenic affections are not fully considered. The chapter on nervous disorders is very full, except that disorders of sleep, as somnambulism, somnalence and somniloquism are omitted.

Barring these few omissions, the work is an authoritative one, and every page shows the genius of a scholar, physician and clinician, who has devoted himself to years of study, supplemented by the most valuable of all acquisitions, a broad practical experience.

The publishers, recognizing that they were dealing with a contribution from a man of note, have done their full share is producing a volume, which is at once, in its large type, good paper and substantial binding, a credit, both to themselves and to the author.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE BROOKLYN MEDICAL JOURNAL for November. Dr. B. F. Kingsley reports a

Case of Tubal Pregnancy with a Fatal Termination.

The patient, a primipara, had missed her periods for five months. She was seen July 29, 1892, suffering with pain localized in the left ovarian region and an examination revealed a mass on that side. A diagnosis was then made of tubal pregnancy but operation was not done. She disappeared and one month after he again saw her and found her vomiting and purging with intense pain—she was pale, pulse small and rapid and had a pinched expression; she was given a hypodermic of morphia and a consultation was requested for after dinner, but in the meantime she died. He thinks an attack of cholera-morbus precipitated the rupture and had an operation been done four to six hours earlier his patient's life would have been saved.

[Books and journals are crowded full of similar experiences, still delay is practiced. The statistics in these cases grows, nearly all can be saved by timely effort, skillful surgical interference. When the physician reaches the belief that he has to do with a case of extra-uterine pregnancy there is but one course for him to pursue—that is to operate at once. There is no time for "dinner" or the *siesta*. Delay means death—promptness of skillful surgical interference will save nearly all. In this reported case the symptoms were pronounced, the diagnosis early made, and correct as revealed by the autopsy. No evil could have come of immediate, intelligently directed surgical interference. To wait for absolute certainity of conditions is to wait for the undertaker.

Before rupture none of these cases can be diagnosed with absolute certainty, though so claimed by some surgeons whose *faculty of guessing* is phenominally developed. There are certain symptoms always associated with the accident which furnish our only guidance, they point the certain and only way—prompt and good surgery. These cases are constantly occurring and are of much greater frequency than is generally recognized, and the mortality would be startling if it were possible to obtain full and accurate statistics.

Morphia was given. In extra-uterine and all pelvic troubles only harm can come from the administration of an opiate; it masks all symptoms, blunts the nervous centres and infuses both patient and doctor with a sense of security that misleads as to actual conditions.—ED.]

Dr. L. A. W. Allman contributes a valuable article on

The Prevention of Blindness from Opthalmia Neonatorum.

He urges every physician to make it a matter of personal responsibility and duty. The cost of maintenance of the blind population of the United States in 1880 was over $16,000,000. Of the inmates of blind asylums the number made blind by this disease were: In Copenhagen, 8 per cent.; in Berlin 20 per cent.; in Vienna 30 per cent.; in Paris, among 208 young subjects, 45 per cent. (Noyes); in 1876 in Germany and Austria 33 per cent. (Horner).

In 1871 in Philadelphia out of 167 inmates of the blind asylum, 20 per cent. (Harlan).

He believes the origin of the disease is from the entrance into the eyes of the child, either during or after birth, of abnormal secretions from the birth canal. In the treatment he considers it "well nigh impossible to remove all possible source of contagion from the vagina" and advocates immediate applications to the eyes of the child. For this he uses Crede's method, viz.: One drop of a two per cent. solution of nitrate of silver dropped into the eyes after thoroughly washing them. He thinks that where this has failed it was because the solution did not reach the eye. He urges that this method be practiced in all cases.

[In our own experience and that of men in extensive dispensary practice this trouble can be prevented by careful and thorough anti-partum douching.—ED.]

Dr. George A. Evans has an article on "Mensuration in the Physical Diagnosis of Pulmonary Phthisis." The author considers mensuration of great importance in this affection and also in other affections of the lungs.

The cyrtometer now commonly used consists of two ribbons of soft metal, connected by a hinge of rubber tubing; this is placed around the chest, then removed and the outline traced on paper. He gives interesting statistics from a number of cases in which the measurements have been made, with the vital capacity at different ages, heights, weight, etc. The temperature is also carefully considered.

Lithemic Neurasthenia

is carefully considered by Dr. Arthur Conklin Brush. He believes that here we have a neurasthenia due to the presence in the blood of certain mal-products formed by disordered hepatic action, producing direct nerve poisoning associated with symptoms arising from a general vaso motor paresis, and a disturbance of the mental condition due to direct toxic action on the cerebral cells.

The exciting causes he divides into two sets. First, those which act by producing general nervous exhaustion. Second, those which act directly upon the liver.

The physical effect produced by this disturbance of the hepatic function again divides itself into two groups. First, in one the secretion of bile is interferred with and the patient becomes anæmic, emaciated and constipated. In the other the biliary secretion is not disturbed and these patients are often florid and robust, but otherwise the symptoms are the same in both sets. Among the symptoms is a feeling of intense nervousness and a feeling of impending evil, often slight melancholia. Disturbances of sensation, as numbness and neuralgic pains, are common; also fibrillary muscular twitching or tonic painful contractions of muscles. Alarming attacking of vertigo and dyspnœa are common. The pulse in the first set is usually rapid and feeble and the skin pale and cold. In the second set it is slow and strong. Tinnitus aurium, often confined to one ear, is present. Slight dyspeptic symptoms arè nearly always present. The tongue is always covered by a more or less thick white or yellowish coat, there is pain, nausea and vomiting, constipation is common and the stools may be deficient in coloring matter. The urine may contain an excess of urates, oxalates and phosphates and a trace of albumen.

In treatment remove the cause if possible. Begin the treatment with a dose of calomel and soda bi-carb. For the constipation salines, but the author prefers a mixture of rhubarb, ipecac and soda; or the pill of aloes, belladonna and strychnia. To increase the functions of the liver give such drugs as are known to increase one of them, the secretion of bile; preferably a combination of ammonium chloride and ipecac. Sugar is to be prohibited and the diet to consist chiefly of vegetables, especially the green ones—with these the patient may have fruit, tea, coffee, cocoa, corn, rice bread, butter, oysters, fish, white meats and poultry.

The use of tobacco should be prohibited and plenty of exercise taken. Anæmia calls for iron and arsenic. Insomnia and nervousness for the bromides.

Dr. Frank Terry Brooks concludes his article on

Hypertrophic Hepatic Cirrhosis.

The paper is an interesting clinical report of a case occurring at the Long Island College Hospital.

He considers the duration of these cases to be usually between one and six years but in one whose vital powers are lowered as in his case which has lasted four and one half years, a severe attack of malarial toxæmia, throwing its force upon the already overburdened liver, a sudden cold, determining itself in this viscus, any respiratory, renal or cardiac disease which would secondarily involve the liver or another sharp acute disturbance referable to the gastro-intestinal tract would hasten the fatal issue.

Among the ætiological factors, alcohol is the most pathogenetic, while constitutional diseases of a wasting and debilitating character, such as specific troubles, chronic Brights, tubercular changes, malarial toxæmia, cardiac lesions and rheumatism, gout or the exanthemata may lead to this condition.

Pathologically considered, a cirrhosed liver is a chronic inflammatory affection of the capsule of Glisson. Macroscopically, the capsule is thickened and opaque, the liver is enlarged and firm in consistence, the cut surface is dry, anæmic and nodular.

Microscopically we find in the hypertrophic variety an increase of interlobular connective tissue and a number of nodules separated by fibrous bands are usually rich in lymphoid and spindle cells, and blood vessels. Fatty infiltration and amyloid degeneration may coexist. The contracted variety differs from it only in the amount and degree of sclerosed tissue.

Therapeutics. In the early stages remove the causes. In his case milk was the chief diet. Locally Ung. Potass. iodid. ʒi-ʒij ad ℥i was applied with massage over the hepatic region; internally the combination giving the best result was

℞		
	Sodii Bromidi	gr. v.
	Ac. Hydrocyanici Dil	♏ iss
	Glycerol pepsinæ	♏ i.
	Aq. menth. pip. ad	℥ij
M.		

Many remedies have been used for this trouble as rhubarb, sodium carbonate, sol. iodi co., bi-chloride of mercury, salines, nitrate silver, etc.

THE ARCHIVES OF PEDIATRICS

for November. Dr. F. Forcheimer has an interesting article on,

The Treatment of Certain Forms of Anæmia in Children.

He presents the following conclusions:

1. In the anæmias of children the hæmoglobin suffers greater reduction than the red corpuscles.
2. If the hæmoglobin can be increased this will produce an increase in the number of red corpuscles.
3. The hæmoglobin having its principal origin in the intestine, can be increased by the internal administration of various remedies having for their action:

a. An antiseptic effect, preventing in this manner the destruction of the precursors of the hæmoglobin.

b. A direct supply of the hæmoglobin (from blood or blood products).

c. To a certain extent, by the internal administration of iron compounds.

Dr. Lewellyn F. Barker reports a case of "Diffuse Scleroderma in a Child of two and a-half months, associated with Pleuro-Pneumonia and General Streptococus-Infection."

He goes carefully into the history of this rare disease and gives the autopsy in full.

Aetiology of Incontinence of Urine in Children.

by Dr. B. K. Rachford. He believes there are three important ætiological factors of incontinence of urine in children.

1. Excitability of the nerve centres produced by heredity and age.
2. Anæmia or mal-nutrition increasing the excitability of the nerve centres.
3. Reflex irritation.

These factors are interdependent and act together in producing this condition.

The remaining papers are "The Treatment of Rachitis," by Dr. J. H. Fruitnight, and "A Case of False Meningocele, by Dr. Irving M. Snow.

THE CHICAGO MEDICAL RECORDER

for October. Dr. Richard Dewey contributes a paper on

General Paralysis,

reporting three cases occurring in husband and wife with syphilitic infection in each case, certain or very probable. The author concludes that if there is any cure for general paralysis it can only be in its very early stages, and at a time long before the special advice is likely to be sought, and still longer before the unfortunate sufferer is sent to the asylum. While general paralysis has been almost universally regarded as wholly incurable, yet an increasing number of cases is coming to light in which it would appear that a recovery had taken place. They must, however, be cases in which the arrest was secured in the incipient stages through early recognition and prompt treatment. The family physician, therefore, stands in the best position to recognize this increasingly frequent and justly dreaded malady and to secure the assistance which may, perhaps, avert years of suffering and the fatal sequel. Patients known to be predisposed may be advised as to their danger, and one in the prodromal stages may possibly be relieved, who at a later stage will be quite beyond help. The author fears that syphilis, communicated from hnsband to wife, causes a larger proportion than is generally suspected of those cases in which general paralysis appears in the female sex.

Dr. J. M. G. Carter discusses the "Relation of the Climate of the Lake Region to Catarrhal Diseases of the Respiratory Organs." As the result of his investigations he concludes that, barring the presence of pathogenic organisms, the most efficient causes of catarrhal diseases of the respiratory tract are extreme variations in temperature, high winds, moist atmosphere, large per cent. of cloudiness, and marked variations in ozone.

Dr. J. L. Hillmantell reports

A Case of Distoma Hematobium

occurring in an Egyptian boy of twelve years of age, employed as a donkey driver at The World's Fair. The boy complained of no pain or inconvenience. Simply the fact of his noticing blood in his urine caused him to consult a physician. He has noticed blood in his urine for the past six years, the quantity varying at different times. General health good. Temperature and pulse, which were taken daily for some time, showed no deviation from the normal. Urinalysis showed sp. gr. 1020, reaction acid, color reddish brown, albumen present about one-third by volume, and considerable sediment with clots of blood. The microscopical examination revealed red blood corpuscles, leucocytes, blood in clots, bladder epithelium in masses, bacteria—probably from external sources—and the ova of the distoma hematobium. Repeated examination of the boy's blood taken from the finger showed no special causes for the hematuria and excluded malaria, which might have come into consideration. The patient was suffering from anæmia due to the long continued drain on his blood-forming organs and the treatment was directed in the direction of aiding repair. The disease is met with only in tropical zones and it is said that over one-half the population of Egypt is affected. The paper is illustrated by woodcuts showing the ova and a fully developed parasite.

The remaining paper in this month's issue is the "Introductory Lecture" delivered by Dr. N. S. Davis before The Northwestern University Medical School.

LANPHEAR'S KANSAS CITY MEDICAL INDEX

for October. Dr. C. E. Ruth contributes a paper on the

Operative Treatment of Cerebro-spinal Meningitis and Traumatic Intra-cranial Lesions without Fracture.

The author believes that cases of cerebral or cerebro-spinal meningitis, idiopathic or traumatic, should be treated on the same principles as obtain in other parts of the body for like conditions, viz.: Evacuation of the products of inflammation, drainage, and if need be irrigation. All head injuries, without fracture, in which immediately or remotely there develops dangerous cerebral compression, call loudly for the use of the trephine. He is convinced from the pathology of cerebro-spinal meningitis that the disease is essentially a surgical disease, and that the earlier surgical aid is secured the greater will be the chances for complete and permanent recovery. He thinks that the indications are as clear in this disease for operative interference to give vent to the products of inflammation as they are in cases of suppurative otitis media with cerebral complications. The best point to drain the sub-arachnoid space is a matter worthy of careful consideration. He believes that these cases can best be relieved by an operation as near as practicable to the greatest accumulation of fluid in the base of the brain, viz.: at the right or left of the median line, below the superior curved line of the occipital bone or immediately above the superior border of the posterior third of the zygoma. After opening the dura and arachnoid in the zygomatic region, if drainage be not free, a director or drainage tube should be carefully passed towards the median line sufficiently far to accomplish the purpose and the tube may be left in or not at the discretion of the surgeon. In the occipital region care should be exercised to avoid injury of the medulla.

The author also thinks that in neglected cases where the exudation has become plastic or purulent, single or even multiple trephine openings will not be sufficient but that irrigation will be needed. After the opening is made in the occipital region on either side if it is thought desirable to irrigate we may open at or in front of the fissure of Sylvius on either or both sides. We should make the opening in the dura only large enough to admit the irrigator nozzle, to prevent the fluid from passing out around the tube, and introduce the fluid slowly. If there are no extensive adhesions the fluid will readily pass to the posterior opening. It will be necessary to open the visceral layer of the arachnoid in some of the late cases and this should be done over the fissure of Sylvius, as the greatest amount of plastic and purulent exudation takes place along the great vessels. The fluids that commend themselves to our consideration for irrigation purposes are sterilized water containing boracic acid or hydrogen peroxide. In experimental work on the cadaver the author found that the fluid passed readily from the anterior to the posterior opening. Should the meningeal inflammation involve both cerebral and spinal meninges then it would be better to make the lower opening in the lower cervical region.

Dr. Thad. A. Reamy reports

A Case of Abdominal Tumor with Obscure Diagnosis.

The patient was twenty-four years of age, single, and presented all the signs of pregnancy except the fœtal heart sounds. The reporter was at first inclined to regard the case as one of pregnancy in spite of the patient's denial. At the section, some months later, the tumor was found to be a cyst in the broad ligament which had grown close to the uterus so as to convey the impression to the examining finger of an enlarged uterus. The nervous irritation caused by the presence of the cyst was sufficient to produce morning nausea and a flow of milk from the breasts.

Dr. J. H. Thompson presents

A Contribution to the Treatment of Acute Granular Conjunctivitis.

The author calls attention to the prevalence of the disease during the haying season as the result of the irritation caused by the flying particles of hay and dust. He advises the thorough bathing of the eye with a solution of boric acid and calcined magnesia so soon as the photophobia is removed by the use of a cocaine solution. After the eye has been thoroughly washed, a drop of a one-half per cent. solution of atropine should be instilled to relieve the keratitis which is nearly always present. As the second part of the treatment he advocates the use of a solution of bichloride of mercury and common salt.

Dr. J. W. Wilhoit contributes a short paper on "Intestinal Obstruction." The author believes that hydrogen gas is a remedy which will work well in such cases. Sulphate of magnesia he believes to be the best medical agent at hand for the relief of either acute or chronic intestinal obstruction.

The remaining papers in this month's issue are "Empyema of the Maxillary Sinus and its Relation to Diseases of the Antrum of Highmore," by Dr. Moreau R. Brown; and "The Structures Existing in the Broad Ligament," by Dr. F. Byron Robinson.

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

THERAPEUTICS.

On the Physiological and Therapeutic Influence of Testicular Liquid on the Animal Organism.

In May, 1892, MM. Brown-Sequard and D'Arsonval arranged to supply organic liquid extracts gratuitously to all medical men who should ask for them, to be employed in the treatment of any affections. The results obtained have been reported, and a *resume* of these have been published as follows:—

1. Return of the normal condition in locomotor ataxia under the influence of testicular liquid. Out of 342 cases of undoubted locomotor ataxia, 314 were much improved or completely cured. Much the best results were obtained when a large dose (5 or 6 cc.) was injected daily.
2. Other scleroses of the spinal cord. In 117 cases of disseminated sclerosis, 97 of considerable benefit or almost complete cure are reported.
3. Friedreich's disease or other organic affection of the spinal cord. In 2 cases of Friedreich's disease there was very considerable improvement. Sixteen cases of myelitis and other organic affections of the cord have shown progressive amelioration.
4. Cerebral affection (hemorrhage, embolic softening, inflammation, traumatism). In 18 out of 17 cases, paralysis, contractures, more or less disturbed mental conditions have notably improved. The course of general paralysis has not been modified.
5. Pulmonary tuberculosis. More than four-fifths of 67 cases have shown improvement in cessation of cough, of fever, of night sweats, return of strength, of appetite, of sleep, etc.
6. Paralysis agitans. Of 27 cases, 25 have improved, but only 1 complete cure is rereported.
7. Cancer. In 103 cases of cancer of the breast, uterus, vagina, rectum, face, lips, nostrils, or other superficial parts, all symptoms have disappeared in spite of the persistence of the tumor. The characteristic tint and other signs of cancerous cachexia, such as weakness, disturbances of digestion, nutrition, ete., hemorrhages, suppurations, ulcerations, local pains, all have disappeared, and, at the same time, sleep and cheerfulness of mind have returned. In certain cases diminution of the tumor is reported.

8. Neurasthenia, hysteria, chorea, and other functional nervous affections. These do not show such good results as do the organic cases. In some cases complete cures have been reported—more especially in chorea.

9· Diabetes and polyuria. Instances of improvement or cure are reported. In some cases better results have been obtained with a mixture of pancreatic and testicular extracts than with either alone.

10. Debility—senility. Much improvement has been got in such cases. In 39 treated by the authors there were only or 54 that were not completely successful.

11. Symptoms have been successfully combated in organic affections of the lungs, heart, kidneys, stomach, liver, intestines, uterus, in Addison's disease, rheumatism, gout, fevers, neuralgia, pseudo-hypertrophic paralysis, etc.

12. So far as the authors know, epilepsy and certain forms of mental disease are the only forms of disease in which this mode of treatment has entirely failed.

In conclusion, it is argued that since the most varied morbid symptoms will disappear under the influence of testicular injections, the nervous system, through an increase of its force by the liquid, must have a more powerful influence on nutrition than has previously been supposed.—*Glasgow Med. Jour.*

MEDICINE

Pulmonary Tuberculosis with Especial Reference to its Prophylaxis, Hygienic and Climatic Treatment.

Dr. Otis, states that there are certain general facts which he holds as true, regarding pulmonary tuberculosis which he presents axiomatically as follows:

(1) Pulmonary tuberculosis is, in the greater number if not all cases, a disease of in-door life and impure air.

(2) The first downward step towards pulmonary tuberculosis is impaired general nutrition.

(3) Improper breathing and insufficient lung ventilation may finally result in pulmonary tuberculosis.

(4) Pulmonary tuberculosis is inheritable in the common acceptation of the term.

(5) Pulmonary tuberculosis can be cured or arrested in not an inconsiderable number of cases.

(6) There is no specific for the disease.

(7) The successful treatment is hygienic and climatic; and under hygenic and climatic I include lung gymnastics.

(8) Pulmonary tuberculosis is capable of being cured or arrested in any and all climates, but more readily and surely in some than in others.

Further on in this interesting paper he enumerates a set of interrogatories for the physician to put to himself in his prophylactic endeavors to avert this disease:

(1) Nutrition: Is proper: food of sufficient quantity taken? and is digestion and assimilation good?

(2) Respiration: Is the breathing full and free? and is there good action of the respiratory muscles?

(3) Air: Is pure air and of sufficient quantity supplied? This is of especial importance in sedentary indoor occupations.

(4) Physical exercise: Is sufficient and proper physical exercise taken to ensure good respiration and circulation and proper elimination of waste products?

(5) Situation of dwelling: As to character of soil (damp or dry, and drainage.

(6) Light and sunshine—with especial reference to in-door life: Do working-room sitting-room and bed-room have sufficient light and sunshine?

(7) Clothing and bathing: Is the clothing sufficient and of proper texture? and is bathing sufficiently frequent, not only for cleanliness but to give tone and vigor to the peripheral blood-vessels?

(8) Mental condition: Do worry and a depressed mental state exist?—*Bost. Med and Surg. Jour.*

Discharge of Ascarides by the Umbilicus.

Dr. Valude reports (*La France Medicale*), the case of an infant which was brought to him on the 4th October, 1891, suffering, it was said, from worms, which were discharged through the navel. The child was a female, aged fourteen months, and otherwise perfectly healthy. No redness or swelling could be seen on examination of the umbilicus, except that the lower half constituted a slight protuberance of the size of a pea, with a moist abraided surface, from which, the mother alleged, the worm made its escape. Pressure on the part established the absence of inflammatory infiltration, but did not cause any worm to appear. After waiting a little while, however, the observer saw one protrude, and he withdrew it himself. Another followed almost immediately. Both were whitish grey in color, eight to ten centimeters long, very lively and active, and perfectly dry; they appeared to come from the lower part of the abdomen.

The child had, from the second week of its life, been partly fed on soup and pap, as the mother's milk was insufficient. In the last week of September, 1891, it began to pass worms by the anus, and on several occasions it had passed seven similar to those above described. On the third October, the lower part of the umbilicus was red and swollen. On the morning of the fourth, a worm emerged from this swelling, and was followed by five others. The child was taken to a druggist, who withdrew three more, and sent the patient to the writer. Some fifteen ascarides were discharged by the navel on that day alone. Santonin had no effect in causing worms to be passed by the rectum; but, a week later, the infant passed five by the anus spontaneously.

On the eighth of November, the umbilicus was thoroughly cicatrised, while the general health continued perfect throughout.—*Glasgow Med. Jour.*

SURGERY.

Vomiting of Anesthesia.

Vomiting during anesthesia may be arrested by compression of the phrenic nerve and vagus. Dr. Joos, of the Cantonal Hospital at Winterthur, applies compression with the thumb on the left side, immediately above the sternal end of the clavicle. The hand is held flat on the thorax and the thumb is parallel with the clavicle. In Dr. Joos' experience the vomitond hiccough forthwith ceases. He also suggests that this treatment might be useful for relief of seasickness.—*Canada Lancet.*

GYNECOLOGY.

The Significance of Vaginal Discharges.

A leucorrhœa inodorous or of mild odor persisting during the climacteric, accompanied by increasing hemorrhage, is suspicious, and demands investigation. A leucorrhœa profuse, of peculiarly fœtid odor, grumous, excoriating, appearing early or late, during the climacteric, with profuse hemorrhage, is reasonable evidence of cancer in the cervix. A leucorrhœa moderate in amount, ill-smelling (the peculiarly fœtid odor of cancer of the cervix being absent), accompanied by hemorrhage, suggests cancer of the corpus uteri. A leucorrhœal discharge containing material like the washings of meat, is said to indicate sarcoma. A watery discharge, as a rule, occurring during menstruation, odorless, or of little odor, persisting, accompanied by profuse hemorrhage, indicate fibroids; with little or no hemorrhage, polypi. Profuse bloody discharges coming on gradually with declining menstruation, ceasing usually with the menstrual flow, point to fibroids. Persistent profuse discharges of blood occuring spontaneously, arising from sudden exercise or coition, occurring, as a rule, after the menopause, indicate cancer. A gradually increasing amount of menstrual flow is suspicious and needs investigating. "Post-climacteric hemorrhages in a fibroma of the uterus of long standing, form one of the principal grounds for the suspicion of sarcoma." (Borner.) The early recognition of malignant disease is demanded and possible prevention of the fatal exhaustion which accompanies it by the administration of drugs, and the application of those methods which, in a measure, may be supposed to offset the terrific drain on the nervous system; inasmuch as present experience shows that early removal of diseased tissue prolongs life, and the importance of early diagnosis and treatment can hardly be over-estimated. —*N. E. Med. Gazette.*

ARMY AND NAVY.

U. S. ARMY, FROM NOVEMBER 5, 1893, TO NOVEMBER 11, 1893.

Promotions.

Captain Edward T. Comegys, Assistant Surgeon, to be Surgeon with the rank of Major, October 20, 1893.

1st Lieut. James D. Clennan, Assistant Surgeon, to be Assistant Surgeon with the rank of Captain, October 29, 1893.

1st. Lieut. Alfred E. Bradley, Assist. Surgeon, to be Assistant Surgeon with the rank of Captain, October 29, 1893.

By direction of the Secretary of War, leave of absence for four months is granted Captain William Stephenson, Assistant Surgeon U. S. Army.

The station of Major Blair D. Taylor, Surgeon, is changed from the old post of Fort Bliss, Texas, to the new post of that name, and he will report in person to the commanding officer of the latter named post for duty.

By direction of the Secretary of War the appointments of William W. Quinton, Thomas S. Bratton, Deane C. Howard, Alexander S. Porter, and William H. Wilson, to be Assistant Surgeons with the rank of 1st. Lieutenants, to rank from October 26, 1893, are announced. They will report in person without delay, to the President of the Army Medical School in this city, for the course of instruction prescribed in General Orders No. 78, A. G. O., September 28, 1893.

NEWS AND MISCELLANY.

Swam the Straits of Messina.

Dr. Judson Daland, of this city, who recently went to Italy to investigate into the causes of cholera epidemics, has performed a feat that surpasses Byron's famous swim across the Hellespont. A friend has just received a letter from him telling of his achievement recently in having swam the Strait of Messina, or what was known to the ancients as the whirlpool between Scylla and Charybdis.

"It occurred to me that it would make a good swim," writes Dr. Daland, "more especially as the hotel-keeper, who had lived in the little fishing village called Faro for thirty-two years, told me that no one had ever swam across, in the memory of the oldest inhabitant, although many tried and failed, including the hotel-keeper himself.

"I took to the water at 4.10 P. M. and arrived in good condition on the Italian shore at 6.30 P. M., a distance of six or seven miles. I started from the Sicilian side at Faro, which corresponds to the Charybdis of the ancients, passed the rock called Scylla, and was forced by the powerful current to make a landing at a little village called Riggio, on the Italian shore.

"The entire swin was made without rest or stimulants, and I restricted myself to the breast and side stroke, not using the back at all. I encountered during the swim strong currents, running apparently in all directions, the direction changing every few moments. These currents were at times warm and at others icy cold. There was a high wind and a choppy sea, making it extremely difficult to breathe. I returned to Messina in good condition, and that same evening went to the opera."

THE

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ORIGINAL ARTICLES.

THE RELATION OF THE OCULAR NERVES TO THE BRAIN.*

CHARLES ZIMMERMANN, M. D.,† MILWAUKEE.

The course which the ocular nerves take from the brain to the muscles of the eyeball is a very long one, and the number of structures they pass is quite large. Therefore it will be necessary, in order to obtain clearness, to divide them into different sections, of which the division into the *orbital* and *intra-cranial* portions will be the chief one. From the supra-orbital fissure the nerves run along the base of the brain until they reach the brain itself, spreading into the root fibres which end in the ganglia cells of the nuclei, and these are connected by fibres with the cortical centres. Speaking of an ocular palsy, exclusive of diseases of the muscular substance, we have, according to the lesions of the nerve in its different portions, an *intra-cranial*, *orbital*, or *peripheral* paralysis. The *intra-cranial*, is either *basal* or *cerebral*, and the latter may be either *cortical*, *nuclear* or *fascicular*. (Mauthner, *die ursæchl. Mom. der Aug. musk—Læhmungen*). By *fascicular* are meant those palsies affecting the fibres between the cortical centers and nucleus or the root fibres, from which the nerve arises, namely, the fibres between nucleus and nerve trunk. Recken (*Klin. M. f. A.*, 1891, p. 349) divides the ocular palsies into *central* and *peripheral*, according to the degenerative reaction which is missing in the first case. Then a central lesion would compress only the cortical and fascicular between cortex and nucleus, all the rest would be peripheral. After we have ascertained the site of the lesion, we have to find out the nature of it, whether it is due to an inflammatory process, to a degeneration, a separation, or a compression caused by a morbid process, which may be a tumor, produced by a neoplasm, an aneurism, an accumulation of blood from a hemorrhage, an abscess, a meningeal exudation, or to retracting connective tissue pulling or strangulating the nervous elements. Finally, if the cause of the morbid condition creating paralysis of the nerve is determined, for instance, if we know that it is a tumor of syphilitic origin, the diagnosis will be complete. How far we are able to arrive at this our aim may be illustrated by statistics of Leibrecht from Shœler's clinic in Berlin (*C. Bl. f. p. A.*, 1891, p. 371): Among 25,000 eye patients, 312 cases of ocular palsies were observed. Seventy of these were under sufficiently long treatment for the collection of careful records, but despite thorough examination by neurologists and long continued observations, the etiology could be elucidated only in 64 per cent. Thirty-six per cent., that is one-third, remained unexplained. Hutchinson has reintroduced the term *ophthalmoplegia*, used by Von Græfe in 1869, and calls it internal, if all the muscular structures are within the globe, and external, if all or the most muscles moving the eye ball are paralyzed. Mauthner changed them into the words *interior* and *exterior*, in order to avoid confusion with paralysis of the internal or external recti, and uses ophthalmoplegia, if muscles of one eye, supplied by different nerves, or if muscles of both eyes are paralyzed.

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*Read before the Wisconsin State Medical Society, 1893.

†Ophthalmic and Aural Surgeon to St. Mary's and Emergency Hospitals.

In searching for the site of the lesion, we must study the cerebral origin of the ocular nerves, especially the location of the *nuclei*. The nucleus of the third nerve, being the most complicated, has been investigated with particular care in the last few years. In 1878, Hensen and Voelckers (*v. Graefe's Arch.* 24, 1, p. I.) found, by stimulating different parts of the brain of dogs with the faradic current, that the nucleus of the third nerve occupies the posterior portion of the floor of the third ventricle, commencing above the mamillary bodies and the floor of the aqueductus Sylvii, to the region of the posterior corpora quadrigemina. The most anterior—the nucleus of the ciliary muscle followed by that of the sphincter pupillæ, lies on the floor of the third ventricle above the mamillary bodies. At the border of third ventricle and aqueduct, below the posterior commissure, are the centers of the rectus internus; on the floor of the aqueduct those of the rectus superior and levator; below the anterior pair of the corpora quadrigemina that of the rectus inferior, and below the posterior pair that of the inferior oblique. They state, however, that the position of the three latter is not absolutely certain, on account of the possible errors arising from the insufficient isolation of the faradic current they used in their experiments. In 1881, Kahler and Pick (*Prag. Z. f. h.* 11. 4., p. 301), from two pathological anatomical investigations observed the same in regard to the interior muscles of the globe, namely, that their nerves originate from the most anterior root fibres of the oculo-motor nerve, but in regard to the exterior muscles, they found in a case of paralysis of levator, rectus superior and inferior oblique, the lateral bunch of the posterior root fibres damaged, the medial intact, which reversely, in another case of paralysis of the internal rectus, was degenerated. They located the root fibres of the rectus inferior also in this medial portion. Starr (*Jrl. of Nervous and Ment. Dis.*, 1888) adopted the same scheme after an analysis of twenty cases. In 1882 and 1883, vonGudden investigated the nucleus of the third nerve in rabbits with his degeneration experiments. After removal of the corresponding muscles of the eye and tracing the secondary degeneration of the nerve to its centers, he discovered that each third nerve has two nuclei, a ventral and a dorsal; the former, consisting of two clusters, is the origin of the nerve of the same side, the latter supplies the opposite nerve with crossed fibres. Edinger, Westphal, Darkschewitsch and others worked on the same subject, but the most detailed description was given by Perlia (*v. Graefe's Arch.*, 35, 4) in 1889. He formulated an anatomical picture of the oculo-motor nucleus by numerous sections of the fetal and adult human brain in frontal, sagittal and horizontal directions. It has the shape almost of a triangle of broad base, with the greatest sagittal diameter of about ten m. m., and is divided into a larger posterior and a smaller anterior portion. The chief group contains four pairs of lateral large-celled nuclei, a single large-celled central and one pair of the small-celled nuclei of Edinger-Westphal. The anterior portion consists of a lateral and a medial cluster, so that all together eight nuclei form the center of the third nerve. He found crossing of the root fibres only of nucleus five and of the fourth nerve, so that Knies takes this as the center of the inferior oblique, which acts in the same sense with the obliquus superior of the other eye.

Pflueger (*v. Græfe's Arch.* 36, 4,) adopts this view of Knies in explaining a nuclear palsy of both obliqui superiores and the right obliquus inferior. Although Perlia thinks that we have not succeeded as yet in proving with certainty by pathological anatomical investigations the connection between any branch of the oculo-motor nerve and its nucleus, Knies (*Arch. f. Augenh*, 1891, 23, p. 45) believes that it can be done with a good deal of certainty by aid of the schemes arrived at by Hensen and Vœlckers, Kahler and Pick, and Starr, but he places the nucleus of the sphincter before that of the ciliary muscle. Perlia advocates, however, the assumption that the posterior longitudinal fascicule connecting the oculo-motor center with the medulla oblongata, forms a connecting link between the nuclei of the third, fourth and sixth nerves. He detected another system of nervous fibres reaching the oculomotor center from above and joining it with the reticular substance of the foot of the peduncle, the function of which is not known yet. Perhaps the cortical fibres of the third nerve originate from them according to Obersteiner (*Anleitung, etc.*, 1892, p. 376). The larger portion of the root fibres runs in a lateral direction to the posterior longitudinal fascicles, forming thicker branches beyond them; the remaining ones, mostly from the dorsal nucleus, run downwards to the median line, in which they cross to the other side. Siemerling (*Chron. progr. Lœhmung der Aug. musk.* 1891), who examined microscopically the nuclei of the ocular nerves in eight cases, which had been observed very closely clinically, could not decide the question in regard to the crossing of the root fibres and the function of the lateral and medial groups. But he places with some probability the center of accommodation and iris in the anterior, and those of the muscles raising the eye-ball in the posterior lateral nuclei. As a new discovery he describes a congeries of ganglia cells in the posterior longitudinal fascicle on the level of the nucleus of the fourth nerve, which he always found intact when ptosis was absent, so that it probably presents the center of the levator. Mendel (*Berl. Klin. W.* 1887 p. 913) localized the center of the upper, or so-called ocular facial nerve, in rabbits and guinea-pigs in the posterior portion of the oculo-motor nucleus. He removed the frontal muscle and the upper and lower lid, in order to destroy the orbicularis completely, and found later atrophy of the posterior portion of the oculo-motor center, but the facial nucleus in the medulla intact. He concludes that the fibres of this nucleus, representing the ocular portion of the facial nerve, run in the posterior longitudinal fasciculi to the nucleus of the facial nerves and unite with peripheral fibres, recognizing in this arrangement an analogy with the spinal nerves noticed in poliomyelitis, that in the center fibres of muscles of associated function, are united fibres terminating in entirely different peripheral nerves, so that in man perhaps the same formation of the facial nerve exists.

This theory would easily explain the fact that in bulbar palsy only the lower fascial branches participate, since the bulbar palsy does not extend so far upward as to reach the nucleus of the oculo-motor and, consequently, of the upper fascial nerve. Birdsall (*Jrl. of Nerv. and Ment. Dis.*) observed a case of ophthalmoplegia exterior with paralysis of the muscles supplied by the third nerve, in which the excitability of the orbicularis and frontal muscles was impaired. This would also correspond to Mendel's hypothesis for the human brain, but the proof by a post-mortem examination was wanting.

The origin of the fourth nerve is close behind the oculo-motor center, and, in frontal sections, below the anterior portion of the posterior part of the corporo-quadrigemina. The root fibres run backwards to the anterior velum medullare, where most of them cross to the other side. The nucleus communicates with the brain by the raphe, with the anterior corpora quadrigemina and the posterior longitudinal fascicle. In Siemerling's (*C. Bl. f. A.* 1891, p. 247) opinion it is not a continuation of the oculo-motor center, at least not as was generally accepted so far.

The nucleus of the sixth nerve lies in the dorsal region of the tegmentum next to the facial knee, and contains large star-shaped cells from which the root fibres develop at its lateral portion, run in a dorsal direction in circles and pass through the region of the tegmentum. A part of them take a median course and cross. The fibræ arcuatæ connect it with the brain, crossing in the raphe, and go in a vertical course to the pyramidal tracts. Other fibres communicate by the posterior longitudinal fascicles with the oculo-motor center.

The results of the latest researches on the nuclei of the ocular nerves are given in some detail, as of the cerebral palsies the nuclear is the most important. According to Mauthner the progressive paralysis of the ocular muscles in most cases is caused by a nuclear lesion. Ophthalmoplegia exterior must be nuclear under all circumstances (if not orbital). Therefore the integrity of the interior muscles of the eyeball is a very valuable symptom in the diagnosis of nuclear paralysis. This can happen only if the lesion attacks the branches of the third nerve at a place where they are separated, and that is in the nuclei. The explanation of this peculiar fact, that in such a small range as the center of the oculo-motor nerve some nuclei should be diseased, the others not, was given by Heubner, (*C. Bl. f. d. med. W. S.* No. 52, 1872). He proved that at the base of the brain the small arteries form no anastomoses and are terminal vessels supplying a very limited portion of the brain substance.

The ramus communicans posterior supplies only the nuclei of the sphincter iridis and ciliary muscle, so that the arterial area of these is perfectly isolated from the other oculo-motor centers. Therefore ophthalmoplegia interior must be nuclear too. But clinical experience has shown that both forms may occur—simultaneously or one after the other, and that nuclei of other cranial nerves may be involved if the morbid process, affecting at first only a small portion of the gray substance in the walls of the third ventricle, extends forwards or backwards. In this way a disease of the nuclei of the exterior muscles may reach the optico-pupillary center in the walls of the third ventricle and abolish the reaction of the pupil to light, without damaging the center of the sphincter, or that of accommodation. Or the center of the sphincter may be destroyed with immobility of the pupils, but the accommodation be preserved. Or the latter may be reached also, so that we have a total paralysis of the third nerve. Then the nuclear lesion has to be diagnosticated from the complications. In other cases the degeneration starting from the most anterior nucleus, being that of accommodation, and traveling downwards, may involve the centers of all the following cranial nerves and finally reach the anterior (motor) cornua of the spinal cord, resulting in progressive muscular atrophy. Another form of nuclear palsy is uncomplicated paralysis of the oculo-motor nerve with myosis described by Fontan (*Mauthner* l. c.) in a case of nicotin intoxication, the nicotin paralyzing the nuclei of the exterior and at the same time irritating the nuclei of the interior muscles.

Paralysis of the third nerve with simultaneous maximal dilation of the pupil may be due to basal or nuclear lesion, by paralyzing the oculo-motor nerve and irritating the more resistant sympathetic fibres by compression, either at the superior orbital fissure or in the walls of the third ventricle, the irritation of which caused mydriasis in the experiments of Hensen and Voelckers.

Although anatomical researches in regard to the ocular nuclei have proven a partial crossing of their fibres, so that a unilateral nuclear paralysis would not be very probable, Mauthner infers from clinical observations that the ocular nerves of each eye have all their nuclei on the same side, and that moncular total ophthalmoplegia is caused by a successive disease of the nuclei of the same side, as in the scheme of Kahler and Pick. Eissen (*Kl. M. f. A.* 1890, p. 277) supports this assumption in opposition to Boettiger (*Arch. f. Psych.* 1889). An isolated or partial palsy of any ocular muscle, as observed in locomotor ataxia, disseminated sclerosis and progressive paralysis of the insane, are nuclear. They may be very slight and transient, and, as for instance, mydriasis may be the precursor of these diseases for many years.

The nuclear character of isolated palsies of the exterior muscles may sometimes be determined from the accompanying symptoms. In diabetes they are probably caused by hemorrhages in the nuclear region. Somnolence is another important symptom of nuclear palsy. Mauthner (*Wein. med. w.* 1891, No. 26 and 27) places the seat of sleep in the gray matter surrounding the central ventricle, in the upper region of which the nuclei of the third nerve are situated, and describes ptosis and paralysis of the internal rectus as the focal symptoms of sleep. Headache and pain in the eye may be present or absent in nuclear palsy. Wernicke and Mobius (*Berl. K. W.* 1884, No. 38) attribute it to irritation of the descending root of the fifth nerve which contains the sensitive fibres of the eye and the dura mater. The manner in which the paresis sets in is characteristic for a nuclear lesion. Before it is complete, the movements are slow, as if in wax, and the palsy can be overcome by an energetic mental effort; or it changes in the course of a day, the ptosis, for instance, is less marked in the morning than at night. This shows clearly the origin in the nuclear cells; if not entirely destroyed, they can be influenced by an impulse, which would be impossible if it were in the nerve itself and the conduction interrupted. The nuclear palsies are not associated as nuclear paralysis of both abducentes was observed. If they last for a time, no double images are complained of. Very different morbid processes may cause nuclear paralysis. Congenital ptosis, for instance, with functional impairment of rectus superior and obliquus inferior is due to a malformation in the nucleus (*Mauthner* p. 377), traumatic hemorrhages into the nuclei, tubercles and compression of the medulla oblongata and of some ocular centers by caries and tumors of the vertebræ. The most common causes are ependymitis, with secondary sclerosis extending into the gray substance around the ventricles, multiple sclerosis and atrophy of the ganglia cells. The nuclear ophthalmoplegia may be congenital or acquired in the first years after birth without any other disturbances, or it may develop in adults and remain stationary without other cerebral symptoms. But it may be complicated with headache, paralysis of other cranial nerves, bulbar palsy, locomotor ataxia, progressive muscular paralysis and mental diseases. In cases of acute or sub-acute development it may be fatal by its complications, or heal and recur, or remain stationary.

Our knowledge of the cortical lesions of the ocular muscles is still very limited, since the cortical centres are not explored beyond doubt. What we know of them is mostly obtained from experiments on animals, consisting in the stimulation of the cortex by faradic currents. Hitzig placed the cortical center of the ocular muscles in the frontal lobe, Hensen and Voelckers in the temporal, Ferrier in the angular gyrus and Munk in the occipital lobe.

Recent experiments of Munk (*C. Bl. f. A.* 1890, p. 149) on dogs confirmed Schæfer's investigations on monkeys, that stimulation of the visual center with weak faradic currents elicits associated ocular movements of the opposite side, the eyes turning downward if the anterior, and upward if the posterior area of the visual sphere is stimulated. Ocular movements never occured if a spot outside the visual sphere was irritated. Munk explains these facts by the supposition that the fixation of the eyes is instituted by perceptions of light, by which stimulation of the radiant fibres of the corona ciliaris is propagated to subcortical portions of the brain. These fibres govern the involuntary movements of the eyes which we perform in order to find the right fixation of objects we noticed only indistinctly before, and are to be considered as congenital reflexes, as the lowest visual reflexes are dependent upon perception of light, not on visual impression. They are a great help for the quick and reliable preception of the visual field. The fibres of association which connect the visual spheres with the cortical motor centers of the ocular movements, govern the higher visual reflexes. Knies, (*l. c.* p. 24.) assumes two different cortical spheres for the voluntary innervations of the ocular muscles. *First*, the visual sphere for the voluntary movements of the eye, convergence and accomodation, and *second*, the so-called motor cortical region of the levator. He acknowledges the involuntary character of the ocular movements obtained by Schaefer and Munk, but they run in the same tracts in which the voluntary impulses to ocular movements are physiologically conducted to the muscular nuclei. All voluntary ocular movements starting from the visual cortex are conjugate and tend to binocular fixation. The visual cortical center of each side governs chiefly the voluntary conjugate movements of the eyes to the opposite side. The area of the visual sphere corresponding to the macula is the cortical center of the voluntary convergence and accommodation of a fixed object and it may start innervations for voluntary movements in all directions. Each visual sphere is connected chiefly with the nuclei of the third and fourth nerve of the same, and with that of the sixth nerve of the opposite side. All voluntary ocular movements are conjugate, therefore all disturbances of them are conjugate.

These quotations will sufficiently show how difficult a definite diagnosis of cortical or fascicular paralysis will be, so far as the fibres between cortex and nucleus are concerned. If a paralysis of the exterior muscles supplied by the third nerve is associated with contra-lateral hemiplegia, the lesion must be fascicular and is located in the pedunculus cerebi, in which the exterior fibres coming from their nuclei behind and the interior fascicles from in front are still separated, as proven by two post-mortem examination of Kahler and Pick. If exterior and interior muscles are affected, the focus must be near the exit of the nerve where they unite, or it may be basal and be caused by two different lesions. Paralysis of the sixth nerve with contra-lateral hemiplegia is due to a focus in the pons. In regard to the differential diagnosis between these three kinds of cerebral palsies from the basal, we have only one symptom which is absolutely certain and that is the integrity of the interior muscles if the exterior are paralyzed. This never happens in basal lesions. The recurrent paralysis of the oculo-motor nerve in most cases is basal. It is characterized by the fact that only one oculo-motor nerve is totally paralyzed, and that each relapse affects always the same nerve, never that of the other side. It heals for awhile, or becomes less in intensity until, after weeks, months, or a year, a new attack occurs, usually commencing with hemicrania and lasting from one day to several weeks or months. It is always acquired in infancy, most likely by an injury of the base of the skull from a trauma of the head, happening so often in children, and subsequently gradually developing pachy—or lepto-meningitis near the trunk of the oculo-motor nerve. The relapses are explained by transient increased hyperaemia (for instance, in females at the time of the menses). Pel (*Berl. K. W.* 1890, 1,) observed a case of recurrent partial paralysis of one third nerve, of nuclear origin proven by the integrity of the interior muscles, in the first stage of locomotor ataxia, relapsing seven times.

The isolated bilateral paralysis of the third nerve may be nuclear, or basal from compression by a tumor or artery at the base, or from meningitis. Both sixth nerves may suffer by a nuclear disease in the fourth ventricle, by a basal affection at the posterior margin of the pons, or by symmetrical compression in the cavernous sinus by tumors from increased intracranial pressure. Affection of both fourth nerves may be in the anterior velum medullare and therefore fascicular, or it may be nuclear, as Pflueger observed in a case.

Sometimes it is very difficult to differentiate a nuclear from a basal unilateral multiple paralysis of cranial nerves, and then the condition of the olfactory and optic nerves becomes very important. Homonymous hemianopia in such cases may be nuclear or basal, as the lesion may be situated in the thalamus opticus and then be nuclear, or in the tractus opticus and then be basal. Amaurosis of the eye of the same side alone or with temporal hemianopia of the other eye can be only basal. In the first case it can only happen by compression of the optic nerve at the base after it has left the chiasm, and in the second case the optic nerve and tract of the affected side are damaged. The affection of the olfactory nerves in multiple paralysis of cranial nerves shows generally a basal cause, but in nuclear paralysis anosmia may be due to a disease in the bulbus olfactorius.

Nuclear and basal palsies may occur simultaneously from the same cause—for instance by a tumor of one hemisphere paralyzing the anterior cerebral nerves by pressure at the base and by hydrocephalus of the fourth ventricle compressing the nuclei at its floor. Bilateral progressive paralysis of cranial nerves is in most cases nuclear, the diagnosis resting chiefly on the condition of pupil and accommodation. Blindness of both eyes without ophthalmoscopic changes, or with simple atrophy of optic nerves in such bilateral affections, may be nuclear as proven by autopsy, or basal caused by strangulation of retracting tissue from a partial chronic basilar meningitis. The peculiar fact was observed in autopsies, that the nerves at the base, even if apparently destroyed, when perfectly flat by compression or imbeded in inflammatory growths or tumors, sometimes do not show any degeneration of their fibres, so that their functional disturbance must be explained by an ischemia of the vessels of the nerves.

The causes of basal palsies may be of various kinds (according to Mauthner's synopsis): Hemorrhages; circumscribed pachymeningitis near the nerve trunks; meningitis of the cortex and the base, the latter mostly tubercular in children—therefore in children double vision from paralysis of an ocular muscle gives a very bad prognosis; abscess of the brain, especially of otitic origin; disease of the basal arteries, as aneurism; arteritis obliterans by want of blood supply to the nerves; syphilitic products and neoplasms growing around and into the nerves. The nerves themselves may be the seat of neuritis, of gummous and tubercular interstitial neuritis and perineuritis; lymphomatous swelling in cases of general lymphomatous and gray degeneration following atrophy of the nuclei.

COMMUNICATIONS.

THE TREATMENT OF ACUTE PNEUMONIA WITH ICE AND SUPPORTING MEASURES.*

THOMAS J. MAYS, A. M., M. D.†

Acute pneumonia is a disease which we all recognize. Its symptoms and physical signs, its course and duration, are constant and characteristic; yet, strange to say, its treatment is as variable and vacillating as its death-roll is long and appalling. In the city of Philadelphia alone fifteen hundred lives are annually sacrificed to this disease. Is this frightful mortality inevitable, or is there a way to escape it? I believe that it can be materially lessened, but before this can be done we must realize the shortcomings and the mischievous tendencies of professional thought on this subject at the present day. I believe that the want of uniformity in the therapeutics of this disease is partly traceable to the prevailing but mistaken theory that pneumonia, like measles and smallpox, is a self-limited disease, and therefore beyond the touch of successful active medication. Then again, the general skepticism of this age has invaded the field of therapeutics and has cast a gloom of doubt on the remedial effects of the long-honored articles of our materia medica. Both of these tendencies in connection with the fact, which has been shown over and over again, that the practical results of the let-alone treatment of pneumonia are superior to those which are obtained when the disease receives the active routine treatment of days gone by, have brought the therapeutic art into undeserved discredit, and have sown broadcast a belief that the less active the treatment is to which pneumonia is subjected the better it is for the patient. In accordance with this view the disease pursues its natural course in spite of any treatment, and all that can be done is to stand by and watch and treat any incidental danger which may develop.

What ground is there, then, for believing that the pneumonic processs is self-limited, and that the therapeutic art is powerless in making a local impression on it? So far as I can see, there is no more reason for regarding pneumonia self-limited than there is for considering any other ordinary acute disease in the same light. All diseases of this kind are limited in duration, but there is no inherent limitation, in the same sense as there is in small-pox or measles. Let us say pneumonia suddenly attacks a single lobe of a lung, and in the course of three or four days it suddenly ends in crisis, and every vestige of the disease disappears. Its sudden onset and termination in many instances lead us to infer that pneumonia is due to the absorption and explosion of a specific poison which exhausts its energy in a few days, and to see an analogy between its behavoir and that of smallpox. On the other hand let us suppose another case of pneumonia involving the same lobe of the lung. In about three days the temperature suddenly drops to within a degree of the normal line, and a favorable termination is anxiously looked for, but instead of this, the temperature rises higher, and on physical examination it is now found that the whole of the adjoining lobe is implicated in the process. A similar succession of events may take place in case another lobe or part of a lobe becomes involved. These phenomena are familar to every practitioner, and yet can anyone say this is definite proof of the self-limitation of pneumonia? Has anyone ever heard of smallpox or measles attacking the body by piecemeal, first invading one area, then another, and so on? Is it not more probable that the duration of the pneumonic process is chiefly governed by the length of time which it naturally takes for the fibrinous exudation to undergo fatty degeneration; and that when the fibrinous deposit occurs successively in different lung areas the disease will be more protracted on this account than if it confines itself to the area which became primarily involved?

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* Read before the Phila. Co. Med. Soc., October 25, 1893.

†Professor of Diseases of the Chest in the Philadelphia Polyclinic, and Visiting Physician to the Rush Hospital for Consumption.

Moreover it is my firm conviction that the prevailing impression that the pneumonic process cannot be controlled or restrained by means of active medication, rests on an equally insecure foundation. I am not rash enough, however, to assume that any form of treatment can be devised which will always insure against death from pneumonia, but from recent experience I believe that a mortality of 20 per cent., which is the usual death-rate, is too high, and that this may be materially reduced. I also firmly believe that this reduction in the mortality cannot be brought about exclusively through internal medication, feeding, or stimulation, valuable as these measures are. The profession fully realize the vital importance of sustaining the strength of the patient thoroughout this disease, and practically this part of the treatment is carried out with very desirable results. Far above the efficacy of all these measures, however, stands ice, or ice-cold water—the local application of which has the undoubted power of subduing and of circumventing the inflammatory process in the lung.

I base this favorable opinion on the results which were brought out in my collective report on "Ice in the Treatment of Acute Pneumonia." This paper consists of the condensed histories of fifty cases which were treated locally with ice or cold applications, and which were reported to me by professional friends, or were collected from the literature on the subject, or came under my personal observation. Out of the entire number, two died, making a death-rate of 4 per cent. Additionally I refer to one hundred and six other cases of pneumonia treated in the same way by Dr. Fieandt, a physician of Finland, who had a mortality only of 2.82 per cent.—giving us a death-rate among all of these cases of 3.2 per cent. Moreover, since the appearance of my paper I have succeeded in securing a number of other reports of cases thus treated, which continue to maintain the favorable impression made by the ice treatment in the first report, and which I hope to include in a future contribution on this interesting problem.

Asides from the fact that both of the cases which died among those reported in my list were suffering from probable incurable disease when they were smitten with pneumonia, and were, perhaps, on this account not the most impartial test for any new remedy, it is quite evident that the total showing is still better than appears on the surface. Great weight must, I think, be laid on the fact that these cases emanate from fourteen independent observers, half of which number report only one case each. This excludes largely the existence of a personal factor —an attribute and a power which grows out of accumulated knowledge and experience and gives its possessor a certain advantage over those less equipped in this direction—and goes far to demonstrate that the curative effects of ice applications do not depend on any very special artistic skill of the medical attendant.

I am often asked whether ice is as efficacious in catarrhal as it is in croupous pneumonia. On theoretic grounds one would be led to believe that it is of greater service in the latter than in the former variety, because the whole inflammatory process is more ephemeral and entails less organic change of the lungs in that form. While my first cases in which the ice was used were exclusively those of the croupous variety, my later experience has taught me that this measure has a similar beneficial effect in catarrhal pneumonia, provided it is pursuing an acute course. This is fully demonstrated by a number of the cases contained in my report, notably by some of the cases which were treated by Dr. Lees, and also by the one reported by Dr. Franklin. Indeed, I believe it is impossible sometimes to discriminate between croupous and catarrhal pneumonia during life, when the latter pursues an acute course, and especially when it takes place in infants or small children.

In what special manner should the ice be employed? For want of a better method, the front, side, and back of the affected area are surrounded with rubber bags filled with ice and wrapped in towels. The number of bags which are needed depends on the size of the area which is involved. If this is small only one or two bags are necessary, but in cases where an extensive area is affected I have applied as many as six and seven, which suffice to cover the whole chest. They are allowed to remain until the temperature becomes nearly normal. Very often it is found that the application of the ice to an affected spot is immediately followed by a marked lowering of the temperature, and improvement in the physical signs in the part. In a very short time, and perhaps in the midst of this amelioration, the temperature rises again, and the patient feels less comfortable than before. Further examination shows that the disease has invaded a new and probably an adjoining territory. Removal of the ice-bags to the fresh spot, or the application of new ones, will again be followed by improvement. This creeping feature of pneumonia must always be borne in mind, and followed up until it ceases.

One difficulty in the use of the ice-bags is to keep them constantly applied to the chest in restless patients, and this has led me to look into the feasibility of making a hollow tin jacket, which adapts itself to the chest, and through which a constant current of ice-cold water may be passed. Such an apparatus I have in contemplation, and when it is perfected I think it will add much to the effectivenesss of the application, and will also be a greater convenience to the patient.

The subject of diet demands the most serious consideration of the practitioner, whose aim should be to administer food of the most nourishing character and in the most concentrated and digestible form. In other words, he should strive to give the stomach as little work to do as possible, and at the same time maintain the nutrition of the patient at the highest point. For this reason two ounces of fresh beef-juice pressed out of round steak should be given alternately every hour and a half or two hours, with eight tablespoonfuls of milk, one of whiskey, and one of lime-water. Beef-powder, and nutrient wine of beef-peptone may also be given.

So far as internal medication is concerned, I would say that strychnine stands first in this respect and should be given unstintedly. Adults should receive $\frac{1}{25}$ or $\frac{1}{20}$ of a grain twice a day hypodermatically, and $\frac{1}{25}$ of a grain by the mouth every four hours, until there is a manifestation of toxic symptoms, such as an increase of the reflexes, especially of the lower extremities. A quarter of a grain of morphine is to be given subcutaneously in the evening to produce sleep. An ice-bag to the head will also help to allay cerebral excitability and restore quiet. Evacuation of the bowels should be secured by the administration of small doses of calomel and sodium bicarbonate.

When cyanosis and difficult respiration become very marked inhalation of oxygen must be employed. The patient may inhale the gas out of an ordinary-sized rubber bag through a suitable mouthpiece which is attached to it. The amount of oxygen which must be given in a case is entirely dependent on the severity of the symptoms, but it is a good rule to push it until the lips and finger-nails assume a more healthy appearance, and the breathing becomes less oppressed, and to give it as often as it is necessary to suppress these symptoms.

Now when we compare the results of the ice treatment of pneumonia with those which are obtained from the prevailing treatment, it will show very much in favor of the former mode of treatment. Thus the mortality of 1012 cases in the Montreal General Hospital was 20 per cent.; while in the Charity Hospital, of New Orleans, it was 20.01 per cent. From 1822 to 1889 the mortality from pneumonia in the Massachusetts General Hospital was 25 per cent. Dr. Hartshorne estimates that the death-rate from this disease in the Pennsylvania Hospital, this city, was about 31 per cent. during the years of 1884, 1885, and 1886. A comparison of this mortality-rate with that which has been derived from the treatment advocated in the present paper, shows that the latter produces results which are at least 75 per cent. better than those which are obtained when the cold applications are not employed. I know that the number of my cases is rather small to draw such promising deductions, but from my experience since they were published I am encouraged to believe that this form of treatment will not only maintain its excellent reputation, but will grow in increased favor on closer acquaintance.

NEWFOUNDLAND dogs are to be employed to rescue the persons who fall or throw themselves into the Seine. The dogs are to be housed upon barges anchored in the river. The skill with which these dogs recognize the falling of persons into the river, and the unerring certainty with which they reach the body by the most direct route and seize it at the proper place and swiftly bring it to the barge or shore, are matters of marvel to all observers.—*American Lancet.*

OPERATIVE PROCEDURES FOR CARCINOMATOUS TUMORS OF THE BREAST.*

J. McFADDEN GASTON, M. D.,† ATLANTA, GA.

The high estimate placed upon the preservation of the mammary gland is attested by the commendable pride of every fair maiden in the development of this part of her organism and by the practical concern of every mother in the due performance of the function of lactation.

Not only from an esthetic standpoint but from utilitarian considerations, the mammary gland is recognized as entitled to a prominent place in the physical structure of woman, and anything which tends to induce diseases of this organ appeals strongly to the physician and surgeon for relief. It becomes us, therefore, to use all diligence in the prophylactic and curative appliances directed to it.

While the mammary gland is liable to injuries of various kinds and to inflammation in connection with its functions, there is a special proclivity to disorders of a graver character, characterized by developments of a malignant kind in its structures.

The mammary gland is peculiarly constituted in the human female and its anatomical relations to the lymphatics render it more liable to complications with the neighboring ganglia, under inflammatory processes, than occurs in any other part of the organism. There are physiological sympathies of this gland with other viscera which indicate a deep seated and intimate correlation between them, but we are interested now especially in the investigation of the link which binds this structure to the general physical system. The involvement of the mammary gland in carcinoma is most frequently associated with marked impairment of the general health, and earlier or later that condition known as cachexia is developed, so as to become characteristic of the progress of a carcinomatous disorder. There is some plausible ground for doubt as to cause and effect in the local and general manifestations of carcinoma, and hence a question in regard to the circumscribed area of the disease at the outset in the tissue of the mammary gland. It is held by most observers that cancer of the breast is primarily a strictly local trouble and if removed at an early period, must be eradicated. But either the tumor has from the outset a proclivity to reproduction, or comparatively few cases are operated on sufficiently early to arrest their progress, as it is well known that a return of the neoplasm is the most frequent result of operations for the removal of carcinomatous tumors of the breast. This holds in regard to the complete as well as the incomplete mode of operating in these cases, and in those patients, without enlargement or induration of the axillary glands, there does not appear any good and sufficient reason for the invasion of this region by the knife. There are no indications of trouble beyond the limits of the breast and under such circumstances, it must prove very difficult, if not quite impracticable, to identify the lymphatic glands and remove them. If it was simply a matter of indifference as to the effect of this complete operation upon the patient, each operator might cut and slash to his heart's content in the axillary and in the clavicular space, but when it adds to the traumatism in a way to damage the prospects of recovery, it certainly should be reserved for the removal of diseased lymphatics. Even in a case of involvement of the ganglia in the clavicular space, it is problematical whether the shock of enucleating them may not overbalance any advantage which can accrue from their removal.

In the legacy left to the profession by Dr. Douglas Morton, in answer to the question, "How should we operate for mammary cancer and when?," it is held that the "completed operation" is not only far more dangerous than the old one, but in an important sense is still incomplete after all. As it is usually done, the axillary glands and some tissues about them are removed. The intervening lymphatic ducts that may be full of cancer cells, especially at their valves, are at best only partially removed; the alveolar buds that shoot out from every gland from the moment it enters the process of becoming fixed are cut or torn through, causing cancer cells to be scattered over the surface of the wound soon to become fixed as new foci. Furthermore the supra- and sub-clavicular glands that in many, perhaps most of the cases, become infected sooner or later, are in the "completed operation" as it is ordinarily done, left intact; even Gross, a most earnest advocate of this operation, removes these glands only when they are palpably enlarged. Butlin calls it a "surgical blunder."

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In order to examine systematically the conditions that bear upon "clearing out" the axilla, Dr. Morton claims that all mammary cancer subjects may be divided into four classes. (1) Those in which the disease has not only infected the axillary glands but by metastasis or otherwise has involved the internal tissues and organs; (2) those in which these glands have become infected, but in which the disease has gone no further; (3) those in which metastases have occurred without infecting the glands; (4) those cases in which the disease is as yet limited to the mamma. He goes on to say that the cases of the first class are plainly not operable. In those of the second, if clearing out the axilla and removing every gland in the whole neighborhood of the diseased breast and the tissues around them, as well, were to complete the operation as the term implies, it would certainly be justifiable, provided the mortality after this procedure is not too great.

The statistics of local recurrences given by Gross in 1888, are quoted by Morton as follows:

Of 409 cases, partial or total extirpation of mamma, without glands, was done in 96 cases.

Recurrence in or near the cicatrix, 46 cases, being 47.91 per cent.

Recurrence in cicatrix and glands, 31 cases, being 19.79 per cent.

Recurrence in glands alone, 19 cases, being 32.29 per cent.

Of amputation of breast with removal of glands, 313 cases.

Recurrence in or near cicatrix, 235 cases, being 75.08 per cent.

Recurrence in glands alone, 38 cases, being 12.14 per cent.

Recurrence in both places, 40 cases, being 12.77 per cent.

These figures, Morton believes, show the impossibility of doing any operation that deserves to be called "completed" after the invasion of the axilla has taken place. They show, too, that the number of local foci so far from being diminished, is certainly very much increased. These facts, taken with the other very important fact that the immediate mortality after the "completed operation" is double (accordingly to the statistics of Butlin) that after the incomplete, seems to Morton, to utterly condemn the former as a life-saving measure in this class of cases.

In the above division, the third class of cases, in which metastatic tumors have occurred, without antecedent glandular involvement, are clearly not amenable to operation.

The fourth class embraces those cases in which the cancer is as yet strictly local, and hence eradicable by operation.

Morton thinks that after the axillary glands have once become involved it is highly improbable that the disease can be eradicated by any surgical procedure.

A point of great moment, as to the extent of operative precedure, pertains to the leaving of any portion of the mammary gland, when only partially implicated in the carcinomatous growth. The esthetic element should never enter into the decision of such a vital question as the arrest of carcinoma, and whenever a breast is the seat of a malignant tumor, whether wholly or partially involved, there should be no hesitation about removing the entire glandular structure. If a part of the mammary gland only seems to be involved and it is evident the knife can be carried outside of the neoplasm into the apparently sound tissues of the breast, there is every reason to believe that if any portion of the gland is left it may become the seat of disease and that recurrence will most likely follow the operation. On the other hand, an entire ablation offers better prospects of success.

The preservation of such part of the skin as may serve to cover up the denuded surface of the thoracic wall, after removal of the breast depends upon the extent to which the cutaneous covering of the tumor is adherent, and consequently involved in the disease. It may be that the direction of the incision will influence materially the capacity for bringing the edges of the skin together, owing to the looseness of the attachment and the elasticity of the tissue in one direction being greater than in another so as to favor traction. In most cases saliency of the tumor admits of making a double elliptical incision, so as to take away the adherent cutaneous covering with the diseased breast, and all the skin which is loosely attached by cellular tissue may be safely preserved to cover the wound without undue traction. Retentive ligatures, at the distance of an inch or more from the margin, may be inserted at the points of greatest tension, and between them broad strips of adhesive plaster may be placed to secure union of the edges. If cancer of the breast returns after removal it is inculcated by most writers to operate again and again, so often as the growth appears, and it is held that thus the life of the patient is prolonged. At the present day, when a patient is free from suffering by an operation, under the influence of anesthesia, there can be no objection to the repetition of cutting while the patient is disposed to submit to the knife. But a patient whose breast was removed in a carcinomatous state some three and a half years ago, had a return of the disease within two years, and took matters into her own hands by employing a quack to treat it with escharotics. I had occasion to examine this lady since, and if she was correct in her conclusion that there was a redevelopment of the cancer, it must be allowed that benefit has resulted from the escharotic treatment. The healing process has proceded so that all the wound is completely cicatrized.

The object lesson afforded by the good result in the case has served to gain another convert to escharotic treatment, in the person of another patient, upon whose breast I had performed a primary operation and a colleague had done a secondary operation for a recurred tumor.

Being impressed with the failure of the knife to avert the carcinomatous growth, the husband of the lady acquiesced in her desire to submit to the escharotic treatment on the occasion of the reproduction of the tumor a second time. In my operation the mammary gland was removed, but finding no involvement of the axillary glands, this region was left untouched. When the second operation was determined upon, in my absence from the city, the colleague upon whom it devolved found an enlarged lymphatic gland near the anterior axillary fold, which was removed by the extension of his incision from the site of the tumor, so as to include this gland.

This complete operation did not secure any better result than my incomplete operation had done, and within a very few months I was called again to verify, not alone the return of the tumor, but also the development of the gland. My opinion was requested as to these growths, which were pronounced to be indications of an unmistakable kind, that the carcinomatous disease had not been eradicated. It was also stated that, in view of the past failures with the knife, little was to be expected from the third cutting operation for the extirpation of the reproduced tumor and gland, and the husband was left to his own choice in selecting the treatment of escharotics on this occasion.

The great suffering inflicted upon the patient by the employment of escharotics in the treatment of malignant growths is an objection of great moment, and yet with the use of morphine the pain is so far mitigated as to become bearable. In a recent treatment of epithelioma of the nose, advanced to the ulceration stage, involving the ala and septum the pain from destructive action of the Vienna paste at the outset and the arsenical paste subsequently, required the free use of hypodermics of morphine and atropia to enable the patient to submit to their applications. He bore the pain in the spirit of martyrdom, as I advised removal with the knife and then to perform a plastic operation immediately to rebuild the nose from the tissues of the cheeks. Upon his urgent request to have the escharotic used, I resorted to this mode of treatment under protest, telling him that it would leave him greatly disfigured to effect a thorough eradication of the cancer. He seems to be now free from disease after the destruction of almost the entire nose.

The relative advantages of the knife and cauteries in the management of carcinoma depend very much upon the progress of the disease. In the incipiency of the local trouble there can be no doubt in regard to the excision being preferable to cauterization, but after full development of a tumor with a tendency to degeneration and breaking down of its structure the resort to escharotics has its advantages in extending to the remote ramifications of the disease. It is a prevalent impression that certain caustic applications attack the diseased structure without affecting the sound tissues and that the so-called roots of the cancer are thus destroyed. There seems to be some just foundation for this belief in regard to application of arsenic, but the destructive effect of caustic potash in the form of Vienna paste extends to every vital structure with which it comes in contact, and the same holds in reference to the plaster of sulphuric acid and charcoal as an escharotic.

The chloride of zinc application is not accompanied with so much pain as the previous named escharotics, and yet does not prove so effective, owing to its less destructive agency.

Quite a number of vegetable products have been likewise employed for the treatment of cancerous affections, but are not so prompt and radical in their effects as the chemical escharotics, and, as a consequence, require a longer time to bring about the disintegration of the morbid growth.

One of the most serious obstacles to the progressive improvement of caustic means applied by so-called doctors is the infatuation that their interests are best served by secrecy as to the remedies used by them. The people who seek their advertised treatment are imposed upon by the air of mystery thrown around their procedures, and if the facts were known, it would appear clearly that there was no virtue in their drugs.

The treatment of carcinomatous tumors of the breast with caustics has been tested fully by Baugard of Belgium. His paste contains chloride of zinc, arsenic, cinnabar and corrosive sublimate. Of one hundred and sixty cases, sixty-two or nearly forty per cent. were free from recurrences three years after treatment.

Bougard's experience leads to the inference that there is something connected with the escharotic application in cases of carcinoma, which is more pervading and far-reaching than simple excision with the knife. As this cauterization does not look to the dissection of the glands from the axilla or clavicular region, it seems that this is not requisite to secure the most favorable results.

Having received a circular letter some two months ago, embodying interrogations upon various points, connected with cancer of the breast, it may not be out of place to incorporate them with my replies.

1. Have you ever seen a breast cancer heal spontaneously? Answer—No.

2. Have you ever lost a case as the direct result of operation, since the advent of antiseptic methods? Answer—Yes.

A single case of encephaloid cancer of the breast of large proportions and necessitating extensive exposure of the thoracic wall, died from shock six hours after complete ablation of the mammary gland.

3. About what is the expectation of life after operation? Answer.—This depends to a large extent upon the period at which an operation is undertaken; those done early recover, and those delayed rarely escape a fatal termination.

4. Have you any case of survival of operation without recurrence longer than three years? Answer.—One case was operated upon nearly five years ago, who has had no return of disease; and is in good health at present. The entire breast was removed without entering the axilla.

5. Have you any cases of survival of operation for three years, and later development of cancer? Answer.—No.

6. About how many cases have you operated upon? Answer.—Ten cases, within the past ten years.

7. Has it been your invariable practice to remove the axillary glands, at the time of operation, or merely in cases when there was evidence of involvement? Answer.—The axilla has not been opened except when there was evident enlargement and induration of the lymphatic glands; and my observation of a departure from this course by others has not proved satisfactory. There is ground for doubt as to the advantage of removing the lymphatic glands even when involved in the disease.

Tobacco Odors on the Breath.

To remove the smell of tobacco from the mouth or breath, Grahame (*Apotheker-Zeitung*) advises bromo-chloral, a few drops in a glass of water, with which the mouth is to be well rinsed.—*Medical Age.*

REPORT OF A YEAR'S WORK IN MINOR GYNECOLOGICAL SURGERY IN THE KENSINGTON HOSPITAL FOR WOMEN, PHILADELPHIA.*

CHARLES P. NOBLE, M. D.

I have been led to make this report of my last year's work in minor gynecological surgery by the fact that very little at this time is written about this subject. Whether this is because gynecologists look upon these matters as having been settled, or because their attention is more largely occupied with the problems of abdominal surgery, is an open question. I believe it is the latter, as even cursory reading of such articles as have appeared during the past few years show a great diversity of opinion about the subject under discussion. In my judgment there is no class of work of more importance in the relief of suffering than minor gynecological surgery, and this estimate of its value, under proper conditions, becomes more emphatic with increasing experience. I hope to point out in the comments upon the work reported wherein some have failed to achieve the good results which they had expected, and where others have done positive harm by their work in this field.

There have been one hundred and forty-five operations in minor surgical gynecology done in the hospital during the past year without a death. The operations were divided as follows:

Perineorrhaphy and trachelorrhaphy	24
Dilatation and curetting	28
Perineorrhaphy	20
Trachelorrhaphy	2
Colporrhaphy	10
General operations	37

It will be seen that in twenty-four cases the cervix and perineum were both sutured, that in twenty cases the perineum alone was sutured, and that in two cases the cervix alone was sutured. These facts are of practical interest, as indicating that, as a rule, when the cervix is torn the perineum is also torn, while the reverse does not hold good. When the disproportion between the head and the cervix is sufficient to cause laceration of the cervix, as a rule, the same accident happens to the perineum; at the same time, the cervix may escape and the perineum be torn, either because of its faulty structure or because of mismanagement of the second stage of labor.

TRACHELORRHAPHY.

This operation was performed twenty-six times; twice alone, and twenty-four times together with the restoration of the perineum. My estimate of the value of this operation remains unchanged. When the cervix is torn, the womb enlarged, the lips of the cervix everted and eroded, with catarrh of the cervix and of the corpus, and especially when, in adddition, menorrhagia and metrorrhagia are present, there is nothing which will bring about the cure of the patient so rapidly, thoroughly and satisfactorily as Emmet's operation on the cervix. It is true that by prolonged treatment of a general character, and with local treatment to reduce pelvic congestion, very many women with laceration of the cervix can be made reasonably well; but this is accomplished only after tedious effort, and then the condition of the woman is not so good as it would have been had she submitted to operation. When properly done, and with proper indications, the operation is practically without danger, and yields very definite and positive good results. Much harm, however, has been done by operating upon the cervix in improper cases; and also, many cases have not been cured because the work has been poorly done. It is hardly rational to expect to cure a woman having diseased uterine appendages by sewing up her cervix; yet this has been done very many times, with the result that the tubal disease has been made worse, a peritonitis immediately ensuing as a direct consequence of the operation, or resulting later through aggravation of the tubal disease. It should be laid down as a fixed law that the cervix should not be sutured unless the uterine appendages are healthy.

It is my practice invariably to dilate

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and curette the uterus before doing a trachelorrhaphy, and catarrh of the cervix and corpus, existing as a complication, are thus removed. The cavity of the uterus is thoroughly washed out after the curetting, and thus the field of operation is made more thoroughly aseptic, and the possibility of infection by septic discharges from the endometrium greatly lessened. The principles of asepsis are as rigidly maintained as when doing abdominal surgery. The vagina is thoroughly scrubbed with soap and water after the patient is anæsthetized; it is then thoroughly washed with clean water, and later with bichloride of mercury solution. This preparation of the field of operation precedes all operation upon the utero-vaginal canal.

In performing trachelorrhaphy I have the patient in the lithotomy position, and remove the diseased and cicatricial tissue usually with the knife, at times with scissors, being careful to provide for an ample cervical canal; the rent is sutured with full curved needles, using catgut as a suturing material. Of the very many cervix operations that I have done I have yet to see a case in which primary union was not obtained. All suturing materials—silver wire, silkworm-gut, silk and catgut have been employed, and the results obtained have been the same; hence, as it is usually necessary to operate on the perineum at the same sitting, I employ catgut, because this suture material is absorbable, and the stitches do not have to be taken out.

In cases in which the cervix is thoroughly diseased, either by cicatricial tissue, or by cystic degeneration, I believe it is better to do Schröder's operation rather than trachelorrhaphy; in the few cases in which I have done Schröder's operation from this indication, the results have been very satisfactory.

DILATATION AND CURETTING.

During the past year there have been twenty-eight such operations. This operation is always done for well-marked endometritis, especially if this be accompanied by marked uterine hemorrhage; also for certain cases of dysmenorrhœa. When the pain of menstruation comes on with or after the onset of the flow, and is distinctly intermittent and cramp-like in character, especially if clots are passed from time to time—the passage of the clot being followed by relief of the pain—dilatation and curetting of the uterus has given excellent results. The trouble lies in the selection of the cases. If every woman who suffers pain during menstruation should have her cervix dilated, undoubtedly more harm than good would be done, because in most cases the difficulty is not a narrow cervical canal. It is only those cases where narrowness of the cervical canal is the cause of the trouble that dilatation will be of service. At times, as a result of the narrow cervical canal and the consequent interference of the discharge both of the menstrual and inter-menstrual secretions, endometritis has resulted, for the relief of which curetting as well as dilatation is necessary. If the cases are well studied and the dilator and curette only employed in such cases of dysmenorrhœa as have been referred to, the results obtained will be very satisfactory. The cause of the narrow cervical canal of most importance is a lack of development of the uterus, especially of the *portio vaginalis*.

Much has been written within the last few years of the direful effects of the use of the dilator and curette. The attack upon this operation has been led by Dr. Price, of this city, and all manner of evil consequences has been ascribed to it. Dr. Price has gone so far as to say that the use of these instruments in the hands of others is the reason why he is kept busy doing abdominal surgery. I cannot believe that this is so, because it is so directly at variance with my own experience. I have used the dilator and curette literally hundreds of times, and were they the instruments of evil described by Dr. Price I should have had the evidence of it in my own work ; on the contrary, only good has resulted, the exceptions being so rare as to be distinctly remembered, and the reason for such ill results distinctly apparent. They were cases (some three in number) in which, although it was recognized that the uterine appendages were diseased, it seemed best to use the curette to arrest uterine hemorrhage. In these cases the tubal disease was made temporarily worse, yet none of them died, nor were their prospects of cure by means of the radical removal of the tubal disease lessened. It is easy to understand that much harm can be done with the dilator and curette if they are used in the presence of tubo-ovarian disease, especially if the appendages contain pus. It would be very easy, under these conditions, to cause a leakage of pus into the peritoneal cavity, and a peritonitis. Both on this account and because it is irrational to expect to cure such a patient by the use of the dilator and curette, in my judgment, under these conditions, these instruments should not be employed, or only under exceptional circumstances. I believe that the ill consequences attributed to dilatation and curetting have been due to this error in the selection of cases, and that the many cases referred to by Dr. Price, in which he believes that serious disease of the appendages was caused by the use of the dilator and curette, that in reality the uterine appendages were diseased before dilatation and curetting were done, and that this disease had simply pursued the usual course, or perhaps had been aggravated by the treatment adopted. Under proper aseptic methods, dilatation and curetting of the uterus, when the tubes and ovaries are healthy, is a harmless procedure on the one hand, and upon the other hand it is one capable of doing great good in the special class of cases of dysmenorrhœa referred to, and whenever endometritis exists.

My opinion concerning the safety with which the uterus can be dilated and curetted under the conditions laid down has been strengthened by the work of certain New York surgeons, especially Dr. Polk, who has employed dilatation and curetting of the uterus in large series of cases in which the appendages were diseased, and this he claims not only without harm, but with benefit, especially in cases of catarrhal salpingitis. While his practice and experience have not induced me to extend the indications for this operation in my work, yet they bear heavily against the argument that dilatation and curetting is so potent for evil.

PERINEORRHAPHY.

There have been forty-four cases of perineorrhaphy during the year. The method of Emmet has been followed, and the results obtained have been most gratifying. Primary union was obtained in forty-two patients; in two cases infection and suppuration prevented union. Emmet's operation upon the perineum is a most admirable addition to surgery, and by it results are obtained, where the injury is extensive, involving the levator ani muscles, which cannot be obtained by the methods usually employed. I believe that this operation is the chief work that Dr. Emmet has given to the profession, and of itself would be enough to give him lasting fame. I was prepared to accept Emmet's operation by my training in an obstetrical hospital, where careful study of many lacerations of the perineum during labor demonstrated that these laceration are never median, except at the posterior commissure of the vulva. At the plane of the hymen, which corresponds to the deep perineal fascia, the laceration always becomes lateral; it extends up one or both sulci of the vagina, and, aside from the skin, mucous membrane and connective tissues, involves a laceration of the perineal fasciæ, transversus perinei and levator ani muscles. A rational operation should have for its object the bringing together of these sundered structures. The denudation must involve the torn commissure of the vulva and the torn sulci of the vagina. The credit of recognizing this is due to Emmet.

The originators of the old median operations, the best of which is Hegar's, did not recognize these facts, and indeed they based their operations upon the old erroneeous teaching concerning the perineal body. The aim of all such operations is to build a buttress of tissue between the vagina and rectum, with the idea that it, because of its wedged shape, will act as a support to the pelvic organs. It was not recognized that the support of the pelvic organs depends upon the integrity of the levator ani muscles and the pelvic fasciæ, and that the object of the operation, when these structures are torn, is to restore them as nearly as possible to their original condition.

In doing the operation I have usually denuded higher up the sulci than does Dr. Emmet, and have taken care to secure a small introitus by carefully denuding and suturing the torn posterior commissure of the vulva. Catgut sutures have been employed high up in the sulci, and silk sutures through the torn ends of the levator muscles and for the remaining sutures. The results from this operation are more certain and satisfactory than from any other in gynecology. When a woman has suffered from severe injury of the levator ani muscles and pelvic fasciæ, she has all the symptoms of a hernia; she feels as though the pelvic contents were dropping out. To restore the pelvic floor in such a case to its normal condition is to make the woman a new creature.

PROCIDENTIA.

There have been ten operations for procidentia, either partial or complete. The method employed in operating for procidentia, excepting one case, was to do first a high amputation of the cervix. The vagina is cut loose from the cervix, the bladder pushed off in front and the peritoneum behind. The lateral attachments of the cervix are ligated and cut away, and then about one inch of the cervix is amputated; the cut vagina is then stitched to the cervix, the mucous membrane of the vagina to the cervical endometrium, in this way covering the stump of the cervix with mucous membrane. Next anterior colporrhaphy is done. Stoltz's method is used when there is much cystocele, otherwise the ordinary oval denudation. And finally, Emmet's perineorrhaphy is done, the denudation being made as extensive as possible; the object being not to restore the parts strictly to their normal condition, but in addition to this to make the vagina and the introitus as small as possible.

I have used this method of operating now for four years, and my experience is that by it fully ninety-five per cent. of cases of procidentia can be permanently cured. I know of only one case in which it was a complete failure.

Procidentia of the uterus, almost without exception, is due to laceration of the pelvic floor, involving the pelvic fasciæ and the levator ani muscles. As a consequence of this injury the pelvic viscera are not properly supported, and rectocele, cystocele and prolapse of the uterus ensue. This result is brought about more rapidly in women obliged to do laborious work, and is favored also if for any reason the womb is enlarged and retroverted. The exceptions to this rule are extremely rare; I have seen but one myself. This was a case of complete procidentia in a nulliparous woman. She had been obliged to do laborious work involving much lifting; her womb doubtless had become retroverted, and, having naturally lax tissues, the intra-abdominal pressure had forced down the uterus, distended the perineum, and turned the vagina inside out. As illustrating the nature of the case, she was completely cured by the use of tampons and the pessary. It is important to insist upon the curability of procidentia, because the reverse of this teaching has been advanced of late, and it has been urged as a reason for performing hysterectomy for procidentia. In my judgment this procedure is illogical unless the uterus contains a tumor or is of great size. It might be advisable also in those rare cases of long standing procidentia and rectocele, in which the tissues of the pelvic floor have become atrophied from long continued over-distension, which prevents the restoration of the pelvic floor.

The philosophy of the method of operating for procidentia which has been advocated is clear. By amputating the cervix the size and weight of the uterus is decreased; and a further gain is made by the removal of the cervix, as this, when present favors the prolapse of the uterus by acting as a guide down the vaginal canal, being deflected forward as the uterus descends by the posterior wall of the vagina. By means of the anterior colporrhaphy the slack of the bladder is taken up and the anterior vaginal wall becomes a straight line from the pubic arch to the cervix, as it should be. And finally, the operation upon the perineum restores the integrity of the pelvic floor and insures a permanent cure by affording an adequate support to the pelvic viscera.

GENERAL OPERATIONS.

The thirty-seven general operations consist of the removal of polypi, the excision of papillomata about the genitalia, scraping operations for cancer in cases in which the disease was too advanced for a radical operation, the closure of two vesico-vaginal fistulæ, the excision of the mammary gland, etc. As I have no suggestions to offer in the performance of these operations that differ from the accepted teachings, it is unnecessary to discuss this subject.

GENERAL CONSIDERATIONS.

Success in minor surgical gynecology, and especially in plastic work, depends upon a thorough gynecological training, and especially upon a knowledge of the anatomical side of the pathological conditions involved, upon the faithful employment of aseptic methods, and especially upon careful work in suturing. Thorough preparation of the field of operation by careful scrubbing with soap and water, the plentiful douching with plain boiled water, followed by bichloride of mercury solution, is just as important in this class of work as in any other, With an aseptic field, with aseptic sutures and instruments, and with aseptic hands, primary union should be almost invariably obtained. In my entire experience in operating upon the utero-vaginal canal I can recall only three cases in which primary union was not obtained, and in only one or two more did infection along the sutures result in the formation of pus; and in these cases primary union was not prevented.

The suturing material employed in this class of work is somewhat a matter of indifference, as a good operator can obtain perfect results with any of the recognized suture materials, provided it is aseptic. I have long given up silver wire because it is troublesome to use and possesses no real advantage for this work. Silkworm-gut is a most excellent material, but is stiff, and therefore the stitches are more painful to remove than are silk stitches; for this reason, unless there is good reason to fear infection, I do not employ it. In complete lacerations of the perineum into the bowel it should be used in preference to silk. Properly prepared catgut has given me complete satisfaction. This I think is because it has been used only when no tension is to be feared. In the cervix it answers perfectly; also for the upper sutures in the perineum. Whereever tension is expected silk has been employed, and answers every expectation. I should hesitate to use catgut for the lower important sutures in doing perineorrphapy, because straining at stool, or coughing on the third or four day, when the catgut sutures have become weakened, might cause the wound to burst open. There is little difficulty in removing four or five silk sutures from each sulcus of the vagina; and the advantage that the silk will sustain the straining at stool or coughing more than compensates for the trifling discomfort of removing these sutures.

In placing sutures, the operator should always bear in mind what he wishes to accomplish with the suture; if he desires to make surfaces unite the one to the other, the suture must be placed so that when tied it forms a circle or nearly a circle. In this way the surfaces are brought together smoothly, and are held together. Superficial sutures placed parallel to the surfaces which it is desired to unite, act as puckering strings, throw these surfaces into folds, and defeat the object aimed at. This apparently simple matter makes all the difference between success and failure in plastic work.

Parasites in India.

The *British Medical Journal*, 1893, p. 807–808, in reviewing Dr. Jobson's work in connection with Beri-beri, gives the following interesting statistics of the presence of parasites in 1,249 natives of India.

PARASITES	Cases	Per Cent.
Anchylostoma duodenale	944	75.58
Ascaris lumbricoides	131	10.49
Oxyuris vermicularis	192	15.36
Flukes Distoma crassum Amphistoma hominis	13	1.04
Trichocephalus dispar	55	4.04
Insect larvæ	6	0.48
Tape worms	18	1.44
Free from parasites	204	16.3

The Clinical Regions of the Abdomen.

In *The Jour. of Anat. and Phys.*, Professor D. J. Cunningham contributes an interesting article on "Delimitation of the Regions of the Abdomen." He recommends that the upper horizontal line should be drawn at the lowest part of the tenth costal cartilages, which is the lowest part of the chest wall as seen from the front. The lower horizontal line is one of more difficulty. Dr. Cunningham suggests one uniting the prominent tubercles on the iliac crests, about two inches behind the anterior superior iliac spines. This line is distinctly below the unbilicus, and puts almost the whole of the iliac fossa in the iliac region. The vertical lines are drawn, one on either side, through the middle of Poupart's ligament.—*Edinburgh Med. Jour.*

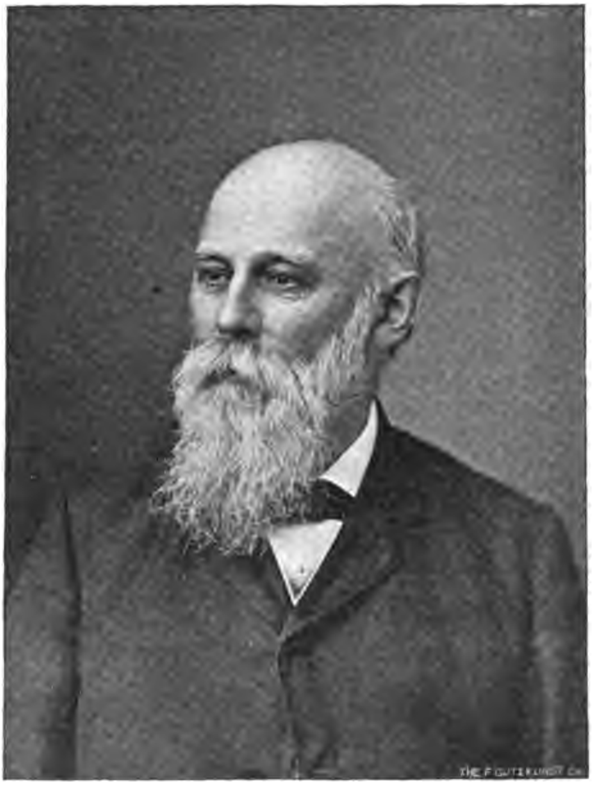
BIOGRAPHICAL SKETCH OF THE LATE ISAAC N. KERLIN, M. D.

LAURENCE TURNBULL, M. D., P. H. G., PHILADELPHIA.

Physicians may be divided into four great classes.

In the first class the individual enters and makes the profession like any other occupation, a simple means of livelihood, acquiring sufficient medical knowledge by the smallest amount of study and preparation. His chief object is to obtain his degree. He enters upon the practice of this noble profession without hesitation or fear of its grave responsibilities. His main object in life is to acquire patients who can pay; with this idea he attends every call promptly. He takes special trouble by inquiry in regard to the amount the patient earns, his salary or income, and charges accordingly. If not paid promptly he soon ceases his visits, having no compassion for the poor, or, God Almighty's patients.'

The second class is the young physician who may have talents and ability with too high an estimate of himself, lacking energy and good common sense. He devotes too much time to chemical or other scientific experiments; and when called at night, in a storm, or when engaged in some interesting occupation, refuses, or sends to a more willing neighbor. The same individual wonders why he has not a lucrative practice or perhaps sneers at, and ignores his more willing and successful rival.


THE F. GUTEKUNST CO.

ISAAC N. KERLIN, M. D.

The third class is the literary, college or high school graduate, with a knowledge of the dead languages, Latin and Greek to assist him in the derivation of his medical medical words, thoroughly versed in orthography and *belles-lettres* able to write well and spell correctly. Having also certain most useful accomplishments, such as the German and French languages, with practical chemistry and physics, above all a mechanical turn for the handling and use of instruments of precision, giving him a great facility for all the operations on the human body. He fortunately has the opportunity of a hospital appointment, or work in a dispensary district, attending the poor for a nominal sum, acquiring a reputation among them, and when able, they are glad and willing to pay. He adapts himself to their needs, giving them words of sympathy and kindness. By taking both time and trouble studying, up each case, he is successful in curing his patients and he receives his reward in a large and lucrative practice, with their heart-felt gratitude.

A fourth class, enters the profession with a high and lofty object, making every effort to attain the highest average in the examination, graduating not in haste but filling up the full number of years of study. Then with an anxious and great desire to further improve theoretical knowledge, enters a hospital to see every variety of human suffering and diseases treated by the highest talent.

Thus did Isaac Kerlin, first in the Wills Hospital and then as assistant to Dr. Parrish, fit himself as an expert in the almost incurable forms of disease he had to treat. Ultimately becoming the successor of Dr. Parrish as physician and superintendent, he gave personal attention to minutest details in every part of the institution.

Such was our friend, tender as a woman to the poor creatures under his care, acting the part of father, guardian, and true friend. Yet in everything that required tact and decision, he was equally up to the mark. It was his to do and dare what was right and true.

Let us view the beginning of his work at the Institution. A very modest building with poor accommodations and now, see the noble structure erected with every appliance for the instruction of the almost idiotic child, with appliances to bring their bent and crooked bodies back to their proper form, as suitable tabernacles for the bright minds and souls, fitted for use on earth and a brighter future in heaven !

With the Doctor every one was taught both by precept and example how to reach that better home where he has gone before.

Isaac N. Kerlin, M. D., was born in Burlington, N. J., May 27, 1834. His parents were Joseph Kerlin, grandson of one of the Penn settlers on the banks of the Delaware, and Sarah Ann Ware, daughter of John T. Ware and granddaughter of John Ware, both prominent shipbuilders, the former connected with the Philadelphia Navy Yard and an inventor of special methods for lighting the interior of vessels. Educated in the public schools and the John Collins Academy at Burlington, N. J., under the preceptorship of the late Dr. Joseph Parrish, he entered the University of Pennsylvania and graduated as doctor of medicine in 1856.

He was appointed resident physician at Wills Hospital in 1875, from whence he was called to the assistant superintendency of the Pennsylvania Training School for Feeble-minded Children, then in its infancy, in October, 1858. He enlisted in the emergency call in 1862, when the advance of Lee's army threatened Philadelphia ; but was called from the ranks by the late State Surgeon-General Henry H. Smith, and placed by him in charge of the night work of the improvised hospital at the Hagerstown Court House, where on the gloomy nights of September 17–21, he gave efficient and faithful service. Three weeks after he was entrusted by Medical Director A. K. Smith, of the United States Army, with the removal of the wounded who were able to be transported to Chambersburg, Harrisburg and Philadelphia. From this service he was called by the United States Sanitary Commission and sent to one of its outposts in Suffolk, Va. Attention was so called to the nature of his work, and especially to his sympathy with the black refugees from the Chowan, that he was recalled to Washington and identified with an interesting epoch in the history of the war which is not widely known. President Lincoln, in December, 1862, was harassed and wavering as to what should be done with the great mass of negroes escaping from slavery, and who were then in wretched condition in camps in and about Washington. He conceived a colonization plan ; the Island of Vache had been leased or acquired to carry out his project, and vessels lay in the Potomac loaded with the blacks and provision for establishing villages when they should have arrived at their destination. The late Henry W. Bellows, president of the United States Sanitary Commission, and Dr. Samual George Howe nominated Dr. Kerlin to the President for the important service of director of the colony of Vache. Pending his arrangements to take charge of the emigrants, small-pox broke out in the fleet, heavy storms arose and the scheme was reluctantly abandoned by the President, to be followed in the spring by the Contraband act, which forever settled the mind of the President as to what to do, or what not to do, with the blacks. After this, Dr. Kerlin was moved by the principal officers of the Commission to the charge of the field work of the Sanitary Commission of the Army of the Potomac, then badly needing reorganizing, and here he remained until after the battle of Chancellorsville in May, 1863, winning for himself the approval of the Commission by his organizing ability and indomitable energy. Later he was urgently recalled to his old post at the Pennsylvania Training School for Feebleminded Children, and succeeded Dr. Parrish as superintendent in November, 1863. His name and life are inseparably connected with that institution and with the uplifting of this unfortunate class; but he kept himself in intimate touch with the medical profession of the state and country, contributing to the journals, numerous articles bearing on the subject of idiocy, and was a member of County and State medical associations. In connection with the care and training of the feebleminded he was the author of two small volumes, "The Mind Unveiled," 1859, and "The Manual of Elwyn," 1891. In July, 1876, he invited to Elwyn the superintendents of the then existing institutions for the feeble-minded and organized a national association, the proceedings of which for the first decennial period were edited and published by him in a volume of four hundred and fifty pages.

In 1889, Dr. Kerlin, in company with his wife, made a protracted foreign visit and were the guests of Dr. Hack Tuke, Jonathan Hutchinson, the late Joseph Beck and of almost all the prominent institutions for the feeble-minded in Great Britain, Norway and Denmark. His wife, Harriet C. Dix Kerlin, closely identified with and honoring his life work, died in December, 1892, leaving four sons—John Ware Sharpless, Isaac Newton, Jr., Ward Dix and Thaddeus Leavitt.

The funeral of Dr. Kerlin, who died Wednesday night, October 25th, was held on October 28th, at his residence at Elwyn, Delaware county. There was a large attendance of friends and officials and attachés of the school over which the doctor had presided for thirty years, with several of his most intimate medical friends. The interment took place on the grounds of the institution. He was placed in a vault built to contain his beloved wife's remains. The Board of Directors held a meeting previous to the funeral and adopted appropriate resolutions of regret and of condolence with the bereaved family.

Dr. Kerlin had not only devoted the best years of his life to this school and won for it the highest rank among institutions of the kind, but he framed the original draft and secured the passage of a bill through the Legislature for a similar institution in the western part of the state. The site for the new school has been selected at Polk, Venango county, Pa.

Mr. Gutekunst has furnished a most admirable and speaking likeness of the Doctor, with his dome-like forehead, his well-shaped nose, and above all the peculiarly happy twinkle of the eye with which he greeted his friends.

> God give us, like him,
> Strong minds, great hearts, true faith and ready hands;
> Men whom the lust of office does not kill;
> Men whom the spoils of office cannot buy;
> Men who possess opinions and a will;
> Men who have honor; men who will not lie.*

THE originator of the intense creasote treatment for tuberculosis, Prof. Sommerbrodt, died at his home in Breslau, August 14, 1893.

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* Versified from Oliver Wendell Holmes.

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SATURDAY, NOVEMBER 25, 1893.

EDITORIAL.

RESPONSIBLE CRANKS.

From the time that irresponsibility was first urged in extenuation of criminal acts, insanity has proved a city of refuge to wrong-doers. Imagination could not devise a weapon of defense more elastic, more elusive nor more efficient. An astute lawyer can make the term 'insanity' cover almost anything from the 'incapability' of the man of property—which is suspected for the first time when some disappointed heir solicits a microscopical examination by the probate court, through the 'temporary aberrations of mind'—which charitably explain the suicide of the debauchee, the unfortunate lapse of the trusted employee, or, in fact, any overt act of moral turpitude that is found out, to the atrocities committed by the violent maniac.

This plea more than any other, perhaps, has righteously served to protect unfortunates from 'man's inhumanity to man,' and likewise, more than any other, it has unrighteously served to elevate crime to a speculation with the chances in favor of the criminal. So intangible is it that the testimony of medical science is practically valueless in the courts and the 'medical expert' has become a by-word.

The daily papers report that a thorough medical examination shows the assassin of the late mayor of Chicago responsible for his acts. This is as it should be so far as our information goes and relying on general principles.

There is one phase of the question which it is desirable to take into consideration. An author, writing for the *Open Court*, presents the very sound view that the theory of political assassination is a justification of private murder. The recent expression, called out by the murder of Mayor Harrison, is but the echo of his words written when Alexander II. was killed by the explosion of a Nihilist's bomb. He then said: 'Once admit the right of assassination as a remedy for political evils, and there will always be somebody under sentence of death, a mark for the private executioner. It is the menace of death to every man above the grade of a tramp."

This is a logical and an absolute statement. Deductively, therefore, they who advocate the murder of a sovereign, ruler, or Governor are promoters of assassination, which is very little different from being accomplices to murders committed in pursuance of those theories of political assassination. The man who incites to crime is as guilty as the man who commits the crime. That has always been held in the case of hired assassination. The man who gives another a certain sum to do a murder, or promises him a material reward on the execution of the deed, is a principal to the murder. Now, it does not make much difference what the nature of the reward may be, whether it be money, food, or the assurance of a bettered condition. The incentives to murder may be as different as are the varieties of murderous actions.

If, therefore, General Trumbull be right in his proposition, the orator who tells a crowd that peace, happiness, independence or prosperity will follow the killing of the rulers or capitalists is indisputably an accomplice with the man who rushes off and kills a ruler or a capitalist. Incitement to murder is no less heinous than the procuring of murder to be done by the payment of reward to the murderer, and the sophistry that condemns the actual commission of a crime and pleads for the immunity of the instigators, the suggestors of the crime, will hardly persuade the American people to destroy the tool and do no harm to the hand that drove it home.

If men who, acting under the influence of incendiary speeches of specious orators, shoot down or cut down some public character are to be exempted from punishment on the plea that they are "cranks" or lunatics, there can be no restraint put upon murder. To use the very words of General Trumbull, that would "threaten every man in America who can wear a decent coat."

There is a responsible insanity. If we hang some of the so-called "cranks" whose "insanity" takes the form of killing the men who displease them we will have fewer assassinations. The example of the gallows uncompromisingly employed is a superb check upon the exhibition of homicidal crankiness. Cranks can reason very well in the eye of the gallows.

THE FOOD EXPOSITION.

The Retail Grocers' Association of Philadelphia have for a number of years past held annual meetings of the 'Pure Food Exposition.' The association is formed for the protection of dealer and consumer alike from adulterated food-stuffs and injurious compounds; for the encouragement of the manufacture of pure products, and for the introduction to the public of novel and meritorious food preparations. The annual exhibition has been remarkably popular, especially among intelligent ladies who have at heart the interests of the healthy home and family.

While the exposition is of immediate value to the exhibitors, being a most successful mode of advertising, it has a much greater, though less definite, value to the public at large in that it is an educational factor of no mean importance. The exposition will be of benefit to medical men and it will repay inspection and study. Not only are the exhibits open to free inspection, but information as to composition and methods of manufacturing is freely given. Instructions are furnished as to mode of preparation of various food articles, and liberal samples are allowed for experiment and trial. The whole exposition is a popular object-lesson of the scientific production and preparation of food materials.

A very valuable and perhaps the most popular feature of the annual exhibition is a course of lectures and demonstrations on the preparation of food, given by Mrs. S. T. Rorer, a teacher of national reputation. This lady whose intellectual powers and tireless energies would make her pre-eminent in any calling, has devoted herself to the scientific investigation of food-stuffs and the best methods of preparing them, and to teaching the practical application of the results of her study. Having more than ordinary information as to the physiological and chemical processes involved, she has a right to speak as one having authority, and, always ready with a reason for the faith that is within her, should be heard with attention and consideration.

One lecture in the course for the special benefit of physicians, is given to the preparation of food for the sick, and the physician who is fortunate enough to hear the lecture will find he has gained more of practical benefit from this clinical demonstration than he could glean from physiologies and chemistries innumerable.

BACTERIOLOGICAL NOTES.

RESEARCHES ON CHOLERA AND VIBRIOES.

Metschnikoff (*Annales d L'Institute Pasteur*, 1893, vii, p. 562), describes the pathogenic effect of several vebrios or comma-shaped spirilla as revealed by a series of inoculation experiments. He has also studied their effect in passing through the human body, more especially the effect which such a condition would exert upon the virulence of the growth. The results of bacteriological investigations during the past few years has resulted in the discovery of a large number of *spirilla* which resemble very closely the germs of Asiatic Cholera described by Koch in 1884 in the excreta of cholera patients. The more important of their forms Metschnikoff has tested so far as their pathogenesis goes. These conclusions are of considerable interest. He confirms Koch's results in that he believes the comma bacillus of Koch is the real cause of Asiatic cholera, notwithstanding its clear resemblance to other spirilla, especially the vibrio metschnikovii. Although he considers this germ to be the cause of the disease, it is an undoubted fact that immense quantities of cholera bacteria can be taken into the intestine without causing cholera. In order to acquire the disease he thinks that the body must be in a state of peculiar susceptibility, the exact nature of which he does not attempt to explain. It is not a question of a predisposition to indigestion, but something quite distinct. The conditions under which cholera vibrio are found in man are very complicated. These microbes, as well as the product of their growth, enter into multiple relations with the digestive juices and the cells of the organism (host.) On the other hand, these bacteria and toxines come in contact with other micro-organisms in the digestive tract and undergo the action of their various products. Judging from what has been done it would seem that the method of vaccination through the digestive tract is much more efficacious than by the hypodermic method. It appears also that the other vibrioes analogous to the cholera vibrio may be pathogenic to man. It may be considered as true that the natural cure of cholera is accomplished without any preventive power being set up in the blood. Finally, he believes that cholera runs its natural course without the production of a preventive property or substances in the blood. The differentiation of certain of the intestinal spirilla from the cholera vibrio is found to be exceedingly difficult.

PHYSIOLOGICAL ACTION OF THE ALBUMOSES FOUND IN THE TISSUES IN DIPHTHERIA.

Martin has contributed some interesting facts to our knowledge of the action of diphtheria bacteria. The work deals with the albumoses found in tissues of diphtheria patients and in cultures of the specific bacteria and their effect upon animals. His work is published in full in its *Report of the Medical Officer of the Local Government Board* 1891–1892 from which the following conclusions are taken.

1. " The bacillus diphtheria forms in diphtheria membrane and in culture media, proteid products of the same chemical nature as those found in the bodies of patients dead of diphtheria, viz., albumoses and an organic acid.

2. The albumoses formed by the bacillus diphtheria in artificial cultivation, have in single and multiple doses the same physiological action as those found in the human body after death by diphtheria. This action is the production of fever, of diarrhœa, of loss of body weight, and of a progressive paresis of the muscles, resulting from a degeneration of the peripheral nerves.

3. The bacillus diphtheria is, therefore, the primary infective agent in diphtheria.

4. The diphtheria bacillus liberates in the membrane a ferment which when absorbed digests the proteids of the body, forming albumoses and an organic acid.

5. These digested products, which are the agents in producing death cause the fever and the depression, and as well the paralysis which follows diphtheria."

A further interesting point to which Dr. Martin calls attention is, quoting his own words, "It is clear from the cases of diphtheria which have been described that the diphtheria products found in the body do not all come direct from the membrane." This conclusion is reached from the fact that in certain cases where there was very little membrane there was a larger amount of diphtheria products in the body. He also believes that there is something more than absorption taking place from the fact that the spleen contains a large quantity of the albumoses and the organic acid, while their specific physiological action shows that they are foreign to the normal body. He believes it more probable that the ferment absorbed from the membrane digests the more or less stagnating proteids in the spleen.

TRANSLATIONS.

THERAPEUTIC HINTS FROM FOREIGN JOURNALS.

IN CHARGE OF THE TRANSLATOR, F. H. PRITCHARD, M. D.

MERCURIAL TREATMENT OF GLANDERS IN THE HUMAN SUBJECT.

Dr. L. K. Gralewski (*Sel-I-Kwai-Medical Journal,* No. 9, 1893) details a couple of very instructive cases of human glanders treated by inunctions of mercury. A gentleman, of forty years, was attacked with acute glanders, in a very severe form and succumbed on the twenty-seventh day, notwithstanding treatment by antipyretics, tepid baths, painting the ulcers with carbolic acid and the internal administration of the iodide of potash. A relative of his, an old gentleman of seventy, yet strong and in good health, contracted the disease and presented itching pink papules on the hands, back, neck and feet. When seen on the seventh day of the symptoms he complained of general prostration, headache, and fever of 39. 8° C. There were besides a crateriform ulcer, with uneven and undermined edges and a congested and elevated encircling zone, and abscess of the size of a walnut on the back of the neck. This was evacuated and, together with the ulcer, painted with carbolic acid and mercurial ointment, in doses of four grams (one drachm) was prescribed epidermically.

In about five days the nodules ceased appearing, the old papules were transformed into small pustules, while others—those freely painted with carbolic acid—sloughed away in ten to twelve days, leaving a delicate pink skin. The course of the disease was exceedingly obstinate and protracted, a complete recovery ensuing about the seventieth day. The total quantity of salve used was about two hundred grams (six ounces and a half). In spite of this energetic use of the drug not the slightest sign of mercurialization was remarked, though a gargle of the chlorate of potash was employed as a precautionary measure. The other case was that of a peasant woman of thirty-five, the servant of the family, who washed the linen of the deceased. She had a fissure in the skin of the dorsum of the right hand between the thumb and forefinger which, on the third day after her last washing, was transformed into a rapidly increasing abscess which in four days attained the size of a hen's egg, while there supervened headache, pain about the hand, and high fever. The pus cavity was opened and washed out antiseptically and mercurial inunctions were ordered. Rapid improvement followed, the patient making a perfect recovery, in seventeen days. Only forty-eight grams (an ounce and a half), of the salve were employed in this latter case. The author adds that while both the adults who nursed the patient contracted the disease, his three children, aged from four to ten years, who were all the time in the closest possible contact with him—laid in bed with him, kissed him, etc.—did not contract the affection. Children hence seem not to be very susceptible to the virus of glanders.

DYSMENORRHŒA.

Dr. V. Cocq (*La Semaine Medicale*, No. 59, 1893) recommends the following formula in dysmenorrhœa:

℞ Fluid Extr. Viburnun Prunifolium,
Fluid Extr. Jamaica Dogwood, ana 2 gms.
(gtts xxx.)
Elixir of Garus,................ 20 gms (ʒv).
Simple Syrup. .... 30 gms (℥j).
Water.......................... 140 gms (℥ ivss).
A Dessert spoonful every two hours.

SALICYLIC ACID AS A TAPE-WORM REMEDY.

Dr. Ozegovski (*Medicinische Neuigkeiten*, No. 36, 1893) speaks highly of salicylic acid as an expeller of tape-worms. He administers it as follows. The patient eats no dinner nor supper, and in the evening takes an ounce of castor oil (thirty grams). The next morning another dose of castor oil, of fifteen grams (½ ounce) is prescribed and from eight o'clock on, a gram (fifteen grains) of salicylic acid, every hour until four doses have been taken. If the worm is not expelled after the fourth dose, another dose of half an ounce of oil may be ordered.

CHLORATE OF SODA IN CANCER OF THE STOMACH.

Dr. Brissaud (*Weiner Medizinische Presse*, No, 42. 1893) knowing the favorable influence of the chlorate of potash in epitheliomata of the mouth and certain forms of cancroids of the face, was led to try chlorate of soda in carcinoma of the stomach. The soda salt has the advantage of being more soluable and less poisonous than the potash salt. By its employment, in doses of eight to sixteen grams, per diem (two to four drachms) he has obtained undoubted improvement in pronounced cases of carcinoma of the stomach with distinct tumor. Under the influence of this treatment, in five cases where the diagnosis was unquestioned, the vomiting of blood ceased, the appetite returned, the cachexia disappeared and in three cases where there was a distinct tumor in the epigastrium, it disappeared completely. He left all cases where there was any doubt entirely out of his report. The epithelial forms are especially those which are favorably influenced, but the interstitial carcinomata were unimproved. On the contrary, there are cases where no such result is to be expected on account of already existing metastases, or grave complications. Other physicians—Hanot, Legendre, have obtained astonishing results with the chlorate of soda, in carcinoma of the stomach. Lepine, of Lyons, has used the chlorate of potash with good results in epitheliomata. He advises not only the use of the remedy but in large doses.

CRYSTALLINE A SUBSTITUTE FOR COLLODION.

Dr. L. Phillips (*La Semaine Medicale*, No. 59, 1893) presents this substance, a solution of pyroxyline or gun-cotton in methyl alcohol, as a substitute for collodion. It is analogous to collodion but it evaporates less rapidly and forms upon the skin a translucid, durable and imperceptible film upon the face instead of the opaque and friable pellicle of collodion. Hence it is of especial value in the application of remedies to the face and its slow evaporation enables it to be handled more easily. Its sole inconvenience is its penetrating odor. An elastic crystalline may be prepared as follows :

℞	Crystalline	20 gms. (℥ v).
	Castor oil	5 gms. (ʒjv).
	Canada Balsam	10 gms. (ʒijss).

An excellent white varnish may be prepared as follows :

℞	Crystalline	30 gms. (℥ j).
	Castor Oil	4 gms. (ʒj).
	Oxide of Zinc	8 gms. (ʒij).

Crystalline easily dissolves salicylic acid, pyrogallic acids, chrysarobine, sublimate and many other remedies. He has found it of service as a vehicle in various forms of tenia tonsurans, warts, eczema marginatum, lupus erythematosus, syphilides, acne and keratoses. The complete transparency of the pellicle permits one to follow the results of treatment more closely. In confluent acne of the face he has gotten excellent results by the following treatment : the affected part is sponged with a solution of lysol which is allowed to act for a few minutes, then the skin is dried by means of blotting paper and is then covered with a fine film of crystalline. This is left in place for eight days when, on removal, a second application of lysol and crystalline will suffice to effect a cure.

PHENOSALYL AN INNOCUOUS ANTISEPTIC.

Dr. de Christmas (*Le Progrès Mèdicale*, No. 38, 1893) presents the following compound antiseptic which is nearly as powerful as sublimate and possesses none of its inconveniences.

℞	Carbolic Acid	9 gms. (ʒijss).
	Salicylic Acid	1 gm. (grs. xv).
	Lactic Acid	2 gms. (gtts. xxx).
	Menthol	10 cgms. (grs. jss).

This mixture which he calls phenosalyl, is but very slightly toxic, being but two times less active than sublimate is only necessary to use it in very dilute solutions, from 5–7.5 : 1000. In the proportion of 20 : 1000 it will sterilize completely tuberculous sputa—one of sputa to five of solution—after fifteen minutes. It is prepared by heating the three acids to liquifaction and then adding the menthol. It is very soluble in glycerine and in water in proportion of four parts per hundred.

DIPHTHERIA.

Dr. Trouillet (*Il Racooglitore Medico*, No. 10, 1893) recommends the use of Gaucher's collutory, which composition is as follows:

℞	Tartaric Acid	1 gm. (grs. xv).
	Carbolic Acid	50 gms. (ʒjss).
	Camphor	20 gms. (ʒv).
	Alcohol	10 gms. (ʒijss).
	Castor oil	15 gms. (ʒiv).

Apply locally with a camel's hair brush, several times a day. With this local application the membranes disintegrate and are easily removed. It does not destroy the epithelium nor give rise to secondary infection.

HYPODERMIC INJECTION OF MERCURIAL OIL IN CEREBRAL SYPHILIS.

Dr. J. Sacaze (*La Semaine Medicalè*, No. 59, 1893) observed three cases of cerebral syphilis which he treated successfully by hypodermic injection of mercurial oil. The first was a woman of thirty-five, who for about five months had had a very severe headache with nocturnal exacerbations which had resisted the ordinary measures. As certain symptoms were remarked which pointed to syphilis of very recent date—symmetric copper-colored patches on the internal surface of the knees, falling out of the hair and enlargement of the inguinal glands—it was diagnosticated as of syphilitic origin. Inunctions of mercurial salve and two grams (gr. xxx), of the iodide of potash, per diem, after five days' use being followed by no results, a hypodermic of gray oil, not an intramuscular injection, was made, the oil being prepared according to the following formula:

℞	Metallic mercury	20 gms. (ʒv).
	Lanoline	5 gms. (ʒjss).
	Liquid vaseline	35 gms. (℥j. 1-4)

Each cubic centimetre, (fifteen grains,) contains fifty centigrams (eight grains) of mercury. From five to seven cgms. (three-fourths to one grain) of mercury were injected at a time. The headache diminished in intensity from the moment the injection was made and it disappeared completely by the fifth day. The first was made the 10th of March, the other three, the 24th and 31st of March, and then one on the 7th of April. The 27th of April, the headache reappearing, another injection was given and it disappeared the next day. Since then several injections, at regular intervals, sufficed to hold it in check.

The second patient was a servant girl, of twenty-three years, of a robust build, who had for some time been troubled with epileptiform attacks with disturbances of mind, apathy, hebetude, etc. The bromide of sodium associated with borax, was given without result. Various alopecic patches and red spots on the body leading to a suspicion of syphilis, an injection of the oil was made one morning. From the evening of the same day a profound change was observed in her symptoms. Her apathy and hebetude disappeared and she began to interest herself in her work. During the days following this amelioration persisted and her epileptiform seizures did not reappear. The injections were repeated every fifteen days. The patient left the hospital two months and a half after the first injection, completely cured.

The third patient, a woman of thirty-eight years and alcoholic, presented for about a year, slight epileptiform attacks and some symptoms of dementia. She also suffered from alopecia, which led to a suspicion of syphilis, in spite of absence of other symptoms. One single injection of the gray oil suppressed the attacks immediately. After two more injections, repeated at intervals of twenty-two, and nine days, all the cerebral symptoms disappeared. This certain and prompt action of the oil, in cases of cerebral syphilis lead the writer to suggest that it be employed as a means of diagnosis in subjects presenting epileptiform, comatose or other grave symptoms with an obscure origin.

CYSTITIS.

Dr. Luys (*Deutsche Medicinische Wochenschrift*, No. 35, 1893), in a case of tuberculous cystitis in which the urine was very purulent and bloody, and the patient was obliged to urinate every five minutes, with very violent pains towards the end micturition, employed instillations of sublimate, 5:100, according to Guyen's recommendation. To prevent violent pain cocaine was first injected. The first injection was followed by slight hematuria which soon disappeared. They were given every day. Great improvement soon set in so that he was forced to urinate only every half hour. During the following months they were given every second day, later every eight to fourteen days and, finally, every two months. His urine was clear and he was obliged to micturate every two hours, although he was not cured he was placed into a tolerable condition, at least.

Dr. Okleoblom (*Ibid.*), in cystitis, and especially in gonorrhœal vesical catarrh, recommends instillation by means of Guyen's syringe, every second to third day, of one to six cgms. (fifteen drops to a drachm and a half) of a solution of iodoform in ether and oil, 1:7:7. The pain and tenesmus cease at once.

TO DISINFECT SEWERS, WATER-CLOSETS, ETC.

In the (*Raccoglitore Medico*, No. 10, 1893), the following means of disinfecting sewers, drains, water-closets, etc., is recommended. Prepare as much quick-lime as desired, break it into small pieces and place it in liquid carbolic acid for a quarter of an hour, and then preserve it in a tightly-closed vessel. If one wish to disinfect a sewer throw into it a few pieces of the lime which will absorb dampness and send forth any quantity of vapor, impregnated with the carbolic acid, which will penetrate all through the sewer and disinfect it perfectly. Repeat it twice a day.

DYSPNŒA OF ACUTE PHTHISIS.

Dr Bernheim (*Deutsche Med. Wochenschrift*, No. 37, 1893) recommends in the dyspnœa of acute phthisis the following formula:

℞	Caffeine Citrate............	2 gms. (grs. xxx).
	Sulphuric Ether..........	20 gms. (ʒv).

Inject two grains (30 gtts). morning and evening.

A Sign of Breech Presentation.

When, in a woman who has passed the sixth month of pregnancy, a sharp pain is produced by placing the hand on the fundus uteri, it may be almost affirmed that there is a breech presentation. The fact is very frequent, although not constant, being present in about seventy per cent. of cases. The pain is sometimes spontaneous. How is it to be explained? According to Pinard, it is due to the irregular distention produced by the rounded mass of the head. If version is performed, the pain disappears.—*La Clinique Internal.*

DIAGNOSIS OF DIPHTHERITIC ANGINA.*

Marfan (*Le Bull. Méd.*, May 24, 1893), would enforce the following precept in infantile medicine. In the adult an examination of the throat is not necessary unless the patient complains of pain and pharyngeal dysphagia, or when there is some peculiarity in the clinical history as for instance when there is a suspicion of syphilis. In children, however, and especially in small infants, this examination of the throat should always be made whatever may be the trouble for which one is called in consultation and this exploration provokes ordinary cries and agitation which should be utilized to the end of the clinical investigation. The examination of the pharyngeal region will permit us to recognize whether an angina exists. This recognized it is necessary to establish a primary distinction; whether the throat is red or whether it presents on its surface a whitish layer. If it is red there is an erythematous angina present and the fear of diphtheria may be deliberately discarded. One has said, it is true, that diphtheritic angina may appear in two phases: an erythematous and a pseudo-membranous, and some physicians affirm to having seen the disease in the purely erythematous phase; but these affirmations are quite exceptional. If in doubt withhold the diagnosis a few hours when, if the case be diphtheritic, a whitish exudate will be produced. On the contrary, if it be found that the angina is accompanied by the presence of a whitish layer it is always necessary to think of diphtheria and the signs of this disease must be looked for.

There are two principal white anginas: 1. Follicular angina; 2. Pseudo-membranous angina. The *follicular angina* is characterized by the production in the crypts of the tonsil of a whitish material consisting of mucus epithelial cells and round cells. This has been called *cryptic* or *lacunar* tonsilitis. Its aspect is typical; on the more or less tumified and reddened surface of the tonsils may be seen small white spots, about the size of a millet seed. Each of these small spots represents the orifice of a tonsillar lacuna filled with the whitish exudate. Pressure with the finger upon the tonsil will cause this creamy material to exude. The exudate is not adherent. It is easily removed and often gives off an odor somewhat fetid. Placed in water it dissolves completely. In this form of angina the exudate primarily intra-cryptic may at times spread over the surface of the tonsils and give more or less thickness to the whitish spots, and these may even fuse; but nearly always the exudate does not escape the bounds of the tonsillar region to invade the folds of the palate or the uvula. Moreover, in no case may this white material be taken for a false membrane, because it may be readily removed, and dissolves in water.

Pseudo-membranous or *membranous angina*, is quite different from follicular angina. In the beginning there may be seen upon the two tonsils or upon one, a white spot, large. This may at first be readily detached from the tonsil to which it is adherent especially by intra-cryptic filaments; below the exudate the mucosa is red and a little abraded; around it the mucosa is swollen. This first white spot has a great tendency to spread; it does not remain limited to the tonsil but extends to the roof of the palate and its pillars, and down upon the surface of the uvula which may be covered as if by a glove. It also invades the posterior wall of the pharynx. White at first the false membrane becomes finally a dirty gray. Little by little it thickens, becoming more prominent and more adherent. If a piece be removed for examination it will be found to be quite adherent; cannot be scraped off, and will not dissolve in water; it is torn with difficulty; under the microscope it is formed mainly of fibrin and epithelial cells. Once removed it is reproduced nearly always with more or less rapidity, while the exudate of lacunar tonsillitis does not return after clearing a region. Bacteriological researches have shown that all of the pseudo-membranous anginas are not diphtheritic, that is to say, are not caused by the bacillus of Klebs. In other words a pseudo-membrane may be produced by other bacteria, the streptococcus, the staphylococcus, the pneumococcus, and by an unnamed coccus described by Roux and Yersin. In these cases the false membrane is indistinguishable from the diphtheritic membrane.

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* Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Dorland, M. D.

ABSTRACTS.

CONVULSIONS.

Dr. Charles G. Kerley in this article considers "that class of convulsions most frequently met with in children under three years of age, such as come on during apparent health or slight illness, rather than those which develop during or at the close of some serious disease. I know of nothing that will so quickly and thoroughly demoralize a family as the occurrence of an unlooked-for convulsion in one of the children.

A certain degree of fright on the part of the friends and relatives is to be expected, as the appearance of a child during a convulsive seizure is most alarming to those not accustomed to the sight. I am sure, however, that the fright and anxiety would be lessened to a great extent if the nature and termination of such convulsions were better understood, and if it were known that the cause in a large majority of the cases lies in the gastro-intestinal tract, due to an error in diet, and that the attack is not necessarily a symptom of brain disease, as is usually imagined; further, that nearly all such convulsions are entirely recovered from if intelligently managed. Nearly all of the attacks of this nature which I have seen occurred either in badly fed bottle babies, or in those beyond the bottle age who were given their food irregularly or in quality or quantity unsuited to their age. The custom in same households of giving the baby "just a little taste" of some forbidden food is not an infrequent cause of convulsions; the child is pleased with the new sensation, demands more, the "tastes" are repeated and trouble follows. In a few cases I have known a seizure to follow a single indulgence in cake, pie or fruit. I have seen but four cases in fairly well-managed breast-fed infants. In these, one attack followed a fall, the child having received the full force of the fall on the head; in the second, it was the initial symptom of lobar pneumonia; the third was a case of infantile paralysis in which convulsions attended the acute stage; in the fourth, convulsions resulted from a profuse cerebral hemorrhage. In a case occurring under my care an eighteen-months-old-girl had repeated convulsions. The mother supposed teething to be the cause and was frantic because I refused to lance the perfectly healthy, innocent gums; there was no sign of a tooth coming through. After a large dose of castor oil had been given, the patient passed one-eighth of an orange.

Children with rickets are especially predisposed, and an indiscretion in the diet which in a healthy child would produce no discomfort may bring on a violent attack in one so affected.

Teething as an exciter is generally supposed to play an important rôle. This process as a direct cause, through the irritation produced by the direct pressure of the teeth on the gum can, in my opinion, be excluded entirely. Between nine hundred and one thousand infants have cut their teeth while under my care, some of whom had convulsions while teething, but in not a single instance was the teething process a direct cause. Thorough investigation of the circumstances attending the attack and examination of the patient would reveal the true seat of the trouble, which was usually found in the alimentary tract. Had these teething babies been examined only superficially, or had they not been examined at all, as is too often the case, the cause would most certainly have been ascribed to the teeth.

A very interesting case in a child under one year of age was reported several years ago in the London *Lancet*. A long hair became fastened between two teeth and hung down the throat; the irritation of the alimentary tract thus produced caused repeated attacks until the hair was discovered and removed.

Convulsions may occur in the very young and weak as the result of heat prostration. Worms are mentioned as a fruitful cause. I have seen but one case of this nature, in a strong boy of three years. That he should show marked nervous disturbance is not surprising, as vigorous, well-directed treatment removed forty large roundworms during the next three days.

Lobar pneumonia is sometimes ushered in with convulsions, but this occurs far less often than we would be led to suppose.

Among seventy-five cases which I have had the opportunity to observe, convulsions were the inital symptom in but three. The onsets of the brain diseases known as simple and tubercular meningitis, according to my experience, rarely occur with convulsions; they are, of course, a common symptom of these diseases, but usually appear after a period of illness, the symptoms of which are very often diagnostic of serious brain disturbance before the advent of convulsions.

Cases have been reported which were supposed to be due to the irritation produced by unsuitable, tight or ill-fitting clothing, this is certainly not a very common cause; if it were the physicians of this country would be fully occupied caring for infants with convulsions.

The question is often asked, can a child inherit a tendency to convulsions? The offspring of the epileptic and the neurotic are certainly predisposed. The decidedly ancient notion than an infantile eczema should not be treated and cured because it may "strike in" and produce convulsions is too absurd to deserve further mention.

Simon believes that 80 per cent. of the attacks occurring in young children are due to digestive disturbances. Concerning the entire number of cases seen by me, 80 per cent. were due to simple digestive trouble. Besides those occurring during brain diseases, quite a number developed during whooping cough complicated with broncho-pneumonia. Many of the fatal cases of inflammation of the bowels have convulsions late in the disease, death frequently occurring in the attack. I have also seen a few cases occur during scarlatina, measles, malaria, diphtheria and Bright's disease. As regards these cases, however, which come on during apparent health or slight illness, fully 95 per cent. were due to some disturbance in the stomach or intestines. With proper feeding, bathing, clothing and fresh air, the chances of convulsions are very small indeed.

What is to be the management of a child if attacked? The family physician must be summoned at once, a hot mustard bath should be arranged as soon as possible into which the child is placed and kept from ten to thirty minutes, by which time the seizure will ordinarily have passed off, and the child will make known its return to the normal condition by crying. As soon as swallowing is possible give from 1 to 2 teaspoonfuls of castor oil, according to its age; in case vomiting follows, it may relieve the stomach of offending material; if the oil is repeated in a few minutes with a few drops of whiskey added, it will almost always be retained. When the patient is removed from the bath, rub him vigorously until dry, put him in his crib and apply cold cloths to the head; do not hold him on the lap. The room should be cool, darkened slightly, and the patient kept absolutely quiet. If the bowels do not move in a reasonable time, a large warm-water enema should be given. The enema should be given as soon as, or even before, consciousness returns, if there has been habitual constipation, or if the abdomen is at all distended.

The management during the few days following the attack it important. Light and easily digested food must be given—preferably fluids; the bowels should be carefully looked after and all means of excitement avoided; plenty of fresh air is also of benefit. The physician should always be sent for, no matter how light the attack, as it is very apt to be repeated if the cause is not discovered and removed."—*Mother's Nursery Guide.*

The New Entries at the London Medical Schools.

The following is the latest list of new entries at the medical schools in London for the session 1893–94 in the order of precedence: Guy's 238, St. Mary's 164, University College 164, the London 157, St. Bartholomew's 156, King's College 119, St. Thomas's 94, Middlesex 69, Charing Cross 58, Westminster 36, St. George's 27. At the provincial schools the following entries have been returned: Owens College 261, Durham 176, Cambridge 132, Mason College 94, Yorkshire College 68, Bristol Medical School 36, Sheffield Medical School 14.

The Chicago Clinical Review has inaugurated a new department in the current number. That is a list of titles of the original articles and leading editorials that have appeared in the medical periodicals of the month.

THE LIBRARY TABLE.

BOOK REVIEWS.

A System of Genito-Urinary Diseases, Syphilolgy and Dermatology. By various authors. Edited by Prince A. Morrow, A. M. M. D. Clinical Professor of Genito-Urinary Diseases, formerly Lecturer on Dermatology in the University of the City of New York; Surgeon to Charity Hospital, etc; with illustrations. In three volumes. Vol I, Genito-Urinary Diseases. New York: D. Appleton & Co., 1893.

One of the first things that strikes the reviewer is that the articles are written by men whose opinions are of value, and that what they have said they have said well. The articles represent the latest thought on the various subjects and are not, as is too often the case, merely a job lot of old essays long since out of date, dignified by the name of "system." Care has been taken by the editor that each author should keep strictly to the limits assigned to him, and as a result there is little of that overlapping of articles so common in works of this kind.

Not the least of the many attractions of the book is the press work of which the publishers may well feel proud. Good paper, clear type and sharp illustrations render the volume pleasing to the eye and add to its usefulness. Especially beautiful are the colored plates, several of which are scattered thoroughout the book.

The work is the result of the labor of thirty-two contributors. Dr. George Woolsey describes the Anatomy and Physiology of the Genito-Urinary Organs in a carefully written and well illustrated article. To Dr. Ramon Guiteras has been assigned the duty of contributing the article on Diseases of the Penis, while the section on Diseases and Injuries of the Urethra is from the pen of Dr. F. Tilden Brown. Both articles are concise, well written and amply illustrated. The subject of Urethritis is divided into three chapters, Dr. S. Lustgarten discussing the Etiology of the disease in a scholarly manner. The various micro-organisms found in the urethra as well as the true gonococcus of Neisser are fully described and the various methods of staining and culture discussed. The various urethral discharges other than gonorrhœal receive brief mention. Dr. George Emerson Brewer contributes the chapter on Acute Urethritis, while that on Chronic Gonorrhoea is from the master hand of Dr. William K. Otis. Stricture of the Urethra is handled by Dr. J. William White in his usual clear and decisive manner. Especially fine is the article on Stone in the Bladder by Dr. Arthur T. Cabot. The various operations are carefully and clearly described as well as the older methods of dissolving the calculus by medicinal agents. Dr. Morrow, beside his work as editor, has found time to contribute an interesting and valuable article on the Functional Disorders of the Male Sexual Organs. Varicocele is ably dealt with by Dr. Edward L. Keyes, and the chapter on Gonorrhœa in the Female is furnished by Dr. Andrew F. Currier. The remaining articles in the volume are by men equally capable and the whole work is one that American authors and physicians may well be proud of.

In the volume there is little for the critic to carp at. Dr. Otis advocates dilatation of the urethra in gleet so soon as the subacute stage occurs and advises incision of the meatus in order to accomplish this. The operation has been condemned by many on account of the flaccid condition of the meatus which results and the often uselessness of the procedure. Gonorrhœal Rheumatism is still left by Dr. Frank Hartly as an reproach to medicine so far as the treatment by drugs is concerned. Dr. Wyeth, in his article on Hydrocele, advocates the old treatment of tapping and injecting of the sac, making no mention of the more modern method of incision and packing. Again, Dr. Keyes, in speaking of the open treatment of Varicocele, says "I consider it obsolete and shall not describe it." In view of the fact that many surgeons still employ this method, it seems as if it would have been better had he at least described the operation.

The editor has stated in the preface that "The articles are all of the most practical character and appeal directly to the needs of the general practitioner, to whom they will be found to be of the greatest value; as they are epitomes of all that is known on the respective subjects up to the date of the issue of the work," and the implied promise is fully kept.

If the same high standard is maintained in the remaining volumes on Syphilology and Dermatology, the general practitioner and specialist alike will find the work invaluable.

The Medical News Visiting List for 1894. Weekly, dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 176 pages of blanks. The 60-Patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, pocket, pencil, rubber, and catheter-scale, etc. Seal Grain Leather, $1.25. Philadelphia: Lea Brothers & Co., 1893.

This *Visiting List* for 1894, has been thoroughly revised and brought up to date. The text portion contains useful data for the physician, including an alphabetical Table of Diseases, with the most approved Remedies, and a Table of Doses. It also contains sections on Examination of Urine, Artificial Respiration, Incompatibles, Poisons and Antidotes, Diagnostic Table of Eruptive Fevers and the Ligation of Arteries. The classified blanks are arranged to hold records of all kinds of professional work, with memoranda and accounts. Four styles are now published: Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month, and good for any year); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). This last style consists of 256 pages of assorted record blanks, without text. Each style is in one volume, bound in handsome red leather, with pocket, pencil, rubber, and catheter-scale, price, $1.25. When desired, a Ready Reference Thumb-letter Index is furnished at an additional cost of 25 cents.

Duane's Students' Dictionary of Medicine. The Students' Dictionary of Medicine and the Allied Sciences. Comprising the Pronunciation, Derivation and Full Explanation of Medical Terms, together with much collateral descriptive matter, numerous tables, etc. By Alexander Duane, M. D., Assistant Surgeon to the New York Ophthalmic and Aural Institute; Reviser of Medical Terms for Webster's International Dictionary. In one square octavo volume of 658 pages. Cloth, $4.25; half leather; $4.50; full sheep, $5.00. Philadelphia, Lea Brothers & Co., 1893.

This work is the result of the painstaking labor of an author abundantly qualified for the difficult task. The volume is one of merit, and will compell recognition as a standard medical dictionary for students.

Dr. Duane's experience and scholarship are sufficiently attested by his position as Reviser of Medical Terms for *Webster's International Dictionary.* In the present work he has undertaken to provide medical students with full information concerning every word they will meet in acquiring their professional education. The vocabulary is liberal, and its fulness is paralleled by the treatment accorded to each word. The definitions are of the "explanatory" style, including not only a statement of meaning, but likewise much descriptive matter under headings which would be inadequately represented by a definition however full. Thus, under diseases are given causation, symptoms and treatment; under important organs, outlines of structure and functions; under drugs, actions, uses and preparations, the information being arranged so as to give a rational and connected idea of the subject. Extensive tables of bacteria, muscles, arteries, veins, nerves, etc., are included. Each word is followed by its correct pronunciation given by means of a simple and obvious phonetic spelling. Derivation, an unexcelled aid to remembrance of meanings, is likewise fully and clearly stated, Greek letters being replaced with those of the English alphabet, for the convenience of those unfamiliar with Greek. The type has been carefully selected for legibility, and each page contains an extraordinary amount of matter.

Sonsino, P.—Sviluppo, ciclo vitale e ospite intermedio della Bilharzia haematobia. (Proc. verb. della Soc. Tosc. di scieuze nat. addun. di 11 agosta 1893. 1 p)

(The life history of *Bilharzia haematobia.*)

Among the flukes which are found in the human body there is one species which is particularly interesting from several points of view. It is interesting to the physician because it is one of the most injurious parasites found in man. It lives in the veins and causes the disease known in Egypt and various other countries where it occurs, as Bilharziosis. It is of special interest to the zoologist because it is the only fluke found in man in which the sexes are separate. *Fasiola hepatica*, *Distoma sinense*, *Distoma lanceolatum* and the others all being hermaphrodites.

For some years zoologists have speculated and experimented upon the life-history of this parasite. Cobbold attempted to inject various mollusca, crustaceans and insects with the embryonic stage. Harley thought this species might develop without any intermediate host and attempted to infect dogs and cats by feeding the ciliated embryos to them, but his results were negative. Sonsino then experimented with various mollusca and insects but did not succeed in solving the question of the life-history of the parasite. This last summer, Sonsino again experimented with the parasite, and this time seemingly with better success. His results may be summed up as follows:

The life-history of *Bilharzia hœmatobia* is quite different from that of other trematodes.

It consists of a metamorphosis with change of host but without alteration of generations. The intermediate host is a small crustacean. The miracidium (embryo) of *Bilharzia* bores into the crustacean, loses its cilia and becomes encysted. When the crustacean is swallowed in the unfiltered drinking water by persons, the parasite is freed from its cyst, bores its way to the portal vein and completes its development to the adult stage.

A similar parasite (*bilharzia crassa*) occurs in cattle.

The Use of Mono-Bromide of Camphor in Vertigo Epilepsy.

Dr. Bourneville (*Le Progres Medical*) has used this remeay for twenty years in the treatment of epilepsy when vertigo is a frequent complication. Five cases are reported showing the results of administration. The daily dosage is from three to seven capsules, each containing three grams of the remedy. Each week the daily dose is increased by one capsule until the maximum is reached, when the treatment is omitted for a week, to be resumed in the form of a daily dose of three capsules.

Salicylate of Soda per rectum.

In all cases where salicylate of soda disagrees with the stomach, it be administered per rectum without any difficulty. In the clinic at Munich, after an evacuating enema, the following mixture is injected pretty high up in the bowel: one and one-half to two drachms of solicylate of soda; water, three ounces, and a pretty large dose of tr. opii to prevent irritation of the bowel.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE EDINBURG MEDICAL JOURNAL

for November contains a continued article on

The Disorders of Speech,

by Dr. John Wyllie. In speaking of motor aphasia and quoting Trousseau, he says: "The greater number of aphasics are paralyzed in the right hand and cannot write; and if they acquire the habit of writing with the left hand, it is easy to see that they cannot trace, in writing, many more words than they can express in speech." In some cases, however, patients presenting typically the symptoms of motor aphasia in their speech, can yet express themselves correctly in writing. In these cases it is believed that the lesion is not cortical, but sub-cortical; and that it is so situated as to cut across the pathways leading to the organs of phonation and articulation, whilst it leaves intact the pathways connecting the motor speech centres with the centres for writing. The author thinks it far from certain that this exceptional retention of the power of writing is to be always so explained, and asks if it is not possible that the patient was markedly *auditif*, and that his vivid auditory word images were in themselves sufficiently potent to call up the equivalent visual and motor images in the writing centre. The reception and interpretation of audible speech are little, if at all, interfered with; but in the majority of cases, there is an interference with the power of reading.

When motor aphasia is complete, the power of repeating or echoing spoken words is of course destroyed as completely as is the power of volitional or spontaneous utterance. In both cases, the power of utterance would be lost permanently were it not for the further education of the convolution on the other side of the brain.

As to copying of written or printed words, it is not materially interfered with.

Other phenomena associated with it are amimia and paramimia and also sometimes an inability to protrude the tongue by effort of the will.

In training a patient with motor aphasia to speak, it is often of advantage to him to pronounce simple words in his hearing and ask him to repeat them. Let him master the letter sounds first. In this way, in many cases the patient re-acquires the power of speech.

Quoting Wernicke, the author says of conduction aphasia, "The patient understands everything, he can also say everything, but the choice of the right words is disturbed.

The autopsy on a case of this kind revealed the chief lesion to be a softening with depression in the island of Reil and the floor of the sylvian fissure.

Dr. A. G. Miller reports a

Case of Facial Neuralgia Treated by Operation.

The neuralgia originated in the stump of a molar of the upper jaw, the pain was typically explosive and manifested itself mainly in the infra-orbital nerve although the other divisions of the fifth nerve were affected. At the first operation he cut down over the infra-orbital foramen and stretched the nerve. This relieved his patient for a time but the trouble returning he cut down and exposed the infra-orbital foramen and nerve, opening into the antrum without opening the mucous membrane, breaking up the lower wall of the infra-orbital canal, and drawing out the nerves, which gave way. The end was then cauterized with a small wire.

After even this more radical operation some trace of the trouble returned and the author believes that any operation, however radical, is only palliative at the best.

Chemical Examination of the Contents of the Healthy Stomach,

by Alex. L. Gillespie. The conclusions he draws are as follows:

1. Free Hcl. is secreted by the stomach glands from the moment at which food enters the viscus.
2. First stage of gastric digestion, during which no free Hcl. is present, but the total acidity constantly rises.
3. Free Hcl. appears in the stomach contents between the first half hour to the second or third hour.
4. Second stage of gastric digestion, both free and combined Hcl. present. Acidity rising.
5. Third stage, both free and combined Hcl. present. Total acidity falling.
6. The acidity during the earlier part of the first stage is so small that it can probably allow the amylolytic action of the saliva to 9 per cent. on for a short time.
7. The free Hcl. secreted at first combines at once with the proteids in the food.
8. Hcl. originally combined is less antiseptic than pure Hcl.
9. The total solids, both of the filtered and unfiltered contents, fall per cent. from the commencement.
10. The total acidity is lower in the filtered contents; the combined is generally higher, the free lower, than in the unfiltered.
11. The inorganic salts diminish per cent. from the commencement.
12. There is generally an excess of fixed chlorides at the beginning of digestion.
13. The total proteids per cent. in solution fall during digestion.
14. Albumen, probably nucin, increases per cent.; albumosis remain stationary, while the peptones diminish largely per cent.
15. The Micro-organisms are present in large numbers at the beginning of digestion; the numbers diminish as digestion goes on.
16. The stomach contents have no further digestive power unless there be some free Hcl. present.
17. The free Hcl is seldom over .09 per cent. at any hour after a proteid meal. It may

rise to .162 or .27 after a meal chiefly carbohydrate in character.

18. Hcl combined to proteids does not cause heartburn, at least to any appreciable extent, but both free Hcl. and free organic acids do so, the latter especially.

19. The pain which comes on immediately after food has been taken is probably due to the presence of an ulcer, or of erosions or is neurotic in origin. Coming on at the time when free Hcl should appear in the contents, this acid is probably the offender.

If accompanied with flatulence and heartburn, and occuring at variable times after taking food, the author would suspect some fermentation, and, if carbohydrates are badly borne, diminution in the secretion of Hcl. as well.

Deficiency of Hcl. is easily remedied for a time by the administration of some acid by the mouth. Hyperacidity is difficult to treat, and the other organs should be carefully looked into. The diet should be non-irritating.

When the stomach is dilated or the seat of a chronic gastritis, regular lavage gives good results. In gastric ulcer, treat the hyperacidity and if the patient be fed by the bowel, the administration of a little grated meat or albumen water by the mouth will often allay the pain. He believes washing out the stomach in ulcer is followed by relief.

Dr. N. T. Brewis has an interesting article on

Patrotitis following operations on the Abdomino-Pelvic Organs.

He reports a case in which an ovariotomy was followed on the fifth day by swelling in the parotid region. The gland was opened and drainage practiced and the patient made a good recovery.

He thinks we may regard the parotitis which comes on after operation on the sexual and abdominal organs as the result of a reverse sympathy. That cases which run through a course like mumps, ending in resolution, are due to this nerve connection alone; but that those cases which suppurate while sharing the sympathetic relation, must, from the number of fatal results which occur, be regarded as involved in septic intoxication. In suppurative cases which do not terminate fatally he considers that the septicæmia has exploded in the parotid gland.

What is the Best Treatment of Diphtherias

by Dr. Keith Forman MacDonald. He considers that the success we obtain in treating this disease largely depends upon how well our directions are carried out, and how the remedies are used. He relies mainly on the following, when the case is a mild one: an aperient, hot fomentations to the throat, the steam of hot water and the spray of lactic acid and lime water or sulphurous acid and water, a chlorate of potash drink, and a diet of milk and beef tea. When the case is at all severe he gives iron and quinine internally 15 to 20 minims of the tincture of the perchloride and 1 to 5 grains of quinine every four hours. Locally he applys a solution of equal parts of the tincture of the perchloride of iron and glcyerine every four hours, at the same time he uses the lactic acid and sulphurous acid spray alternately several times a day For disinfecting the room and articles of clothing he uses carbolic acid, chloride of lime, Condys fluid and fuming sulphor.

The remaing papers in this issue are "The Etiology of Ectopic Gestation" by Dr. J. C. Webster. "Studies in Fœtal Pathology and Teratology," by Dr. J. W. Ballantyne. "Notes on a Case of Tetanus," by Dr. J. W. Dowden and a continued article on "Varieties of the Appendix Vermiformis, Cæcum, and Ilio-Colic valve in Man," by Dr. John Struthers.

THE AMERICAN JOURNAL OF OBSTETRICS

for November.

This issue of the journal contains four papers on hysterectomy. The first contribution on the subject is by Dr. J. M. Baldy and is entitled

Hysterectomy. Its Indications and Technique.

According to the author, the indications for the operation are:

1. Malignant degenerations of the uterus.
2. Fibroid tumors of the uterus.
3. Pelvic inflammations.
4. Prolapse of the uterus.
5. Inversion of the uterus.

In regard to fibroid tumors, the author is of the opinion that if small and giving rise to no untoward symptoms they should be left unmolested, provided the patient is not exposed by her station in life to attacks of inflammation and is living in such a neighborhood that competent surgical aid can be obtained if necessary. If the patient be within a few years of the menopause it may be advisable to adopt for the time being the expectant line of treatment. Under all conditions a fibroid tumor of the uterus should be subjected to surgical treatment and the author believes that hysterectomy is the proper procedure to adopt. Myomectomy can only be considered where the patient is of such an age as to make it desirable and possible for her to bear children and where the uterine appendages are healthy and capable of performing their function; the reverse of which is true in the majority of fibroids.

In pelvic inflammations, Dr. Baldy believes that hysterectomy should be the operation of choice in all cases in which the uterine walls are infiltrated with pus and the uterus materially enlarged. All cases of prolapsus uteri, in which the usual surgical means have been tried and failed, should be subjected to hysterectomy as a sure means of cure. The operation should always be followed by plastic operations on the anterior and posterior vaginal walls for the repair of the relaxation of the vagina.

The author believes that the combined method of performing hysterectomy is superfluous and more dangerous than either the vaginal or abdominal operation alone. Vaginal hysterectomy by means of the catgut ligature has, in the author's hands, proved the safest and most satisfactory of the vaginal operations.

The author also thinks that, in abdominal hysterectomy, the dropping of the stump back into the pelvic cavity is preferable to the extra-peritoneal method. He is also strongly in favor of the supra-vaginal amputation as against total extirpation. The technique of the operations are described and the various steps illustrated. The author advises the Trendelenberg position in performing abdominal hysterectomy.

The second paper is by Dr. George M. Edebohls on

The Technique of Total Extirpation of the Fibromatous Uterus.

When treatment is called for, the author believes that surgery is invariably to be preferred to any and every other method of therapeusis. The method of operating which the author prefers is as follows : The patient is placed in the lithotomy position and the vagina and uterus carefully disinfected and the uterine cavity and vagina packed with antiseptic gauze. The position of the patient is then changed to the Trendelenburg posture. The tumor is delivered through the abdominal incision and pulled as far as possible out of the pelvis. A transverse incision is made through the peritoneal covering of the anterior and posterior surfaces of the uterus from one broad ligament across to the other. The two peritoneal flaps thus marked out should be large enough to easily cover the defect in the pelvic floor left after the removal of the uterus. The peritoneal flaps are next stripped from the surface of the uterus. In doing this the bladder and ureters are carried forward with the anterior flap well out of the way of harm during the further steps of the operation. The uterine artery on either side is next secured by a subperitoneal mass ligature of stout catgut, carried well down to but not into the vagina. The broad ligaments are tied off by two further catgut ligatures on either side, one embracing the round ligament and the other the infundibulo-pelvic ligament and the spermatic artery. The cutting-out of the uterus, tumor, and appendages in one piece between the ligatures is now an easy and bloodless procedure. The six ligatures are cut short and the knots turned downward toward the vagina and the gap in the pelvic floor closed by uniting the anterior and posterior flaps by means of a transverse, running Lembert suture of catgut, extending from the stump of one infundibulo-pelvic ligament across to that of the other. The peritoneum is dry-cleansed with sterilized gauze, the abdominal wound closed without drainage, and the patient returned to the lithotomy position. The gauze packing is removed from the vagina and replaced by a loose dressing of gauze applied in such a way as to drain the supra-vaginal subperitoneal space.

The author believes the method to possess the following advantages:

1. The danger of infection from the uterus and vagina is entirely avoided, or at least minimized.

2. The uterine arteries are secured with ease and certainty. The distension of the vagina by the gauze packing enables the operator to carry the mass ligature well down to the vagina and to include the supply to the upper end of the vagina as well, so that there will be no bleeding of the vaginal arteries after cutting out the uterus.

3. The operation is practically bloodless. With the exception of the incision through the peritoneum fore and aft, no part is divided until its blood supply has been secured.

4. The danger of wounding the bladder or uterus is reduced to a minimum. These organs are lifted with the anterior peritoneal flap well out of the field of operation.

5. The closure of the peritoneum is as perfect as it can be made, its *status qu ante* is restored, and no foreign body is left in its cavity.

6. The after-treatment required is practically *nil*. The patients have generally left bed at the end of two, and hospital at the end of three weeks.

The third paper is by Dr. E. E. Montgomery and deals with

Vaginal Hysterectomy.

The author points out clearly the indications for the operation and the symptoms which should lead the practitioner to look for diseased conditions of the uterus requiring surgical interference. He urges that a thorough examination be made in any suspected case and the operation performed at as early a period as possible, if disease exists. In the preparation of the patient for operation the author urges that the patient be subjected to antiseptic vaginal douches, and that, several days before operation, the vagina should be carefully cleansed with a solution of creolin and tincture of green soap, and the diseased tissue carefully cut away with a sharp curette and scissors, the cavity and vagina irrigated with a hot sublimate douche 1: 2000, dried, and packed with iodoform gauze. Later this packing should be removed, the vagina cleansed and repacked. The latter packing may remain till the time of operation when it should be removed and the cavity and external surfaces carefully cleansed with the creolin and soap solution and finally irrigated with hot sterilized water. The external surfaces should have previously been shaved.

The author prefers the clamp to the ligature in securing the broad ligaments for the following reasons:

1. Its ease of application, enabling the operator to economize valuable time.

2. The greater security against hemorrhage —the ligature, though apparently securely tied, may slip from the stump when the latter shrinks after the removal of the uterus.

3. We have no infected ligature to complicate or delay the subsequent convalescence.

4. By traction upon the clamps we are enabled to carry the gauze tampon above the lacerated surfaces and pen the intestines within the peritoneal-lined cavity, thus affording ready exit for the sloughing tissue devitalized by the pressure of the intruments.

The author reports twenty-one operations performed with twenty-one recoveries and concludes from this showing that the operation certainly cannot be a very dangerous one.

The fourth paper is by Dr. Joseph Price on

The Extra-peritoneal Treatment of the Stump in Supra-uaginal Hysterectomy.

In this paper the author makes an urgent plea for the use of the nœud in hysterectomy. The objections to its use are carefully considered and answered. He declares that a proper pedicle can always be made and the operator who cannot do so is not competent to perform the operation. He condemns the use of multiple ligatures in the pelvic cavity as adding to the gravity of the operation. He affirms that the nœud should never slip and that the bowel should never be included in its grasp and also that by care the bladder and ureters ought never to be involved. He is convinced that if for any reason it is concluded that the nœud cannot be, complete extirpation is likely to be the safest resort and therefore the one to be selected. Results and statistics are wholly in favor of the extra— and supraperitoneal operation and clean extirpation. The latter procedure he does not oppose, having performed it successfully, but he considers that the risks are greater than in the old and established procedure.

[Judging by Dr. Price's statistics, the operation by means of the nœud in his hands is a most satisfactory procedure however far it may fall short of being an ideal one.—ED.]

Dr. Henry J. Garrigues contributes a paper on

Symphysiotomy.

The space gained, the limits and indications as well as the téchnique of the operation are all carefully considered by the author in the paper. He regards the subcutaneous incision as the best and would resort to the open method only in case of uncontrollable hemorrhage, if the repairs of injuries demand it, or the symphsis cannot be cut. The suturing of the ends of the bones with silver sutures he regards as superfluous and an unnecessary complication of the operation. The soft parts, skin and adispose tisspe should under all circumstances be united by deep and superficial silk sutures, which are left in for a week or ten days. Drainage he considers to be superfluous. In order to keep the two halves of the pelvis together nothing is better than rubber adhesive paster. While the straps of adhesive plaster are being applied, and during after-treatment, the patient should lie with outstretched legs, the knees together, and the feet turned inward, as this position of itself approximates the ends of the bones

In regard to maternal injuries, the author believes that the protection of the vagina with a vectis-like instrument, as proposed by H. W. Freund, is not practicable. The placing of the hand between the bones, as recommended by Schauta, seems to the author to be more likely to increase the tension than to lessen it. The chief thing, he believes, is to extract very slowly and in the right direction. If injuries occur they should be repaired immediately with silk or catgut sutures. If there is a tear in the bladder it should be closed with continuous tier catgut sutures, one applied to the mucous membrane the other to the muscular coat and the peritoneum.

In regard to the relation of symphysiotomy to other obstetric operations. Cranotomy on the living child, or what is worse, expectation till the child is dead, followed by craniotomy, ought never to be thought of in any community in which it is possible to obtain the assistance of a man capable of performing symphysiotomy. As to the induction of premature labor, in cases in which the mother's life is to be preferred, induction of premature labor retains its position ; but in others, in which the life of the child is of particular importance, symphysiotomy is to be preferred, the infant mortality being only about half as large as in the other operation. In regard to its relation to Cæsarean section, the author concludes, after reviewing the statistics, that with proper regard for the life of the mother there can be no hesitation in regard to the preferability of symphysiotomy. The operation competes with the Porro operation, as it has been safely performed after the woman has been many days in labor. Any form of Cæsarian section ought therefore, to be confined to the cases in which the coarctation goes beyond the limits for symphysiotomy. Even difficult forceps and version operations ought to be replaced by symphysiotomy, and if the child were unusually large the operation would be indicated even with a normal pelvis.

In the author's opinion symphysiotomy is a valuable addition to obstetrical resorrces, which ought to be performed frequently in maternities and in private specialist practice.

Dr. A. W. Abbott contributes a paper on

The Co-ordination of the Muscles Closing the Urethra Vagina and Rectum, and its Application to the Precise Diagnosis and the Surgical Treatment of Injuries to the Pelvic Floor.

The author gives the following rule for ascertaining what muscle or muscles of the perineum are torn. The patient is placed in the lithotomy position with the perineum exposed. If the patient alternately contracts and relaxes the sphincter ani, all the other muscles involved contracting and relaxing at the same instant, it will be immediately apparent, by touching the normal positions of the various muscles, which ones contract throughout their full extent and are therefore intact, and those that are torn by the partial or total loss of contractile hardening at the point of rupture. The exact site of injury may often be made out by sight alone, the sound side drawing up, while the tissues of the injured side are carried toward the uninjured side instead of counteracting the effect of the latter as they normally should. Having definitely located the injury, the technique of the operation is simple. Incise the mucosa and dissect down to the torn ends of the muscle. Place stitches so as to draw the ends of the muscle together. If the rupture involves only the transversus perinei a small transverse incision will suffice. If the pubic part of the levator ani is ruptured the incision should be in the sulcus and the dissection carried down to the plane of the levator, in some cases as far as the posterior plane of the rectum, and the muscles exposed and drawn up with catch forceps; tendon or well-chromicized catgut should then be passed so as to get a deep and secure hold upon the muscles. It is usually necessary to dissect up the outside mucosa and fascia, so as to get as good a point as possible for the new insertion of the muscle. Should it be necessary, the operation may be completed by Emmet's operation.

Dr. Edward W. Jenks discusses the subject of

Perineo-vaginal Restoration.

Four important ends are to be attained in repairing the class of injuries under consideration: 1. To restore the loss of power and function to the lower portion of the rectum and vagina. 2. To restore the normal sustaining quality of the posterior vaginal wall for the anterior vaginal wall and bladder. 3. To provide as much support for the uterus as the perineum naturally gives. 4. To cure the many distressing nervous accompaniments. The operation he advocates is of the flap-splitting variety, or submucous dissections, advocated by Mr. Tait. For suturing material he prefers silkworm gut, which possesses the principal advantages of silver wire and is not so unyielding. The author especially directs attention to the following points:

1. Any single mode of operating is not adapted to every case of laceration of the perineum.
2. All other qualifications being equal, that surgeon will be the most successful in this class of operations who, instead of following hard-and-fast rules, possesses a mechanical skill which he can adapt to the peculiarities of each individual case.
3. The subsequent comfort of the patients is not facilitated by the superabundance of cicatricial tissue within the vagina; therefore the anterior wall, instead of being subjected to any surgical procedure for redundancy, should be sustained by a restoration of the normal posterior wall.
4. The surgical operation advocated by the author has for its object a restoration of the torn posterior vaginal wall and perineum to their normal condition and functions, whereby there is afforded (a) support for the uterus to the full extent provided for in the vaginal walls; (b) support for the anterior vaginal wall and bladder; (c) support for the lower end of the rectum.

The article is illustrated by wood-cuts showing the various steps of operation advocated by the author.

Dr. Hugh Hamilton describes "The Application of Graphics to the Fœtal Heart Sounds," by means of an instrument on the principle of the telephone but so designed as to record the tracings of the maternal and fœtal heart sounds on blackened paper by which means they can be differentiated and compared. The article is illustrated by a cut of the instrument referred to, showing its application.

The remaining papers in this months issue are: "Recent Surgical Advances and their Relation to Conservative Obstetrics," by Dr. W. Reynolds Wilson; "The Pathology and Treatment of Puerperal Infection," by Dr. Edward A. Ayers; "Exophthalmic Goitre," by Dr. Edmund Lee Tompkins; "Two cases of Phlegmasia Dolens," by Dr. J. T. Winter; and the "Inaugural Address before the Section on Obstetrics of the First Pan-American Medical Congress," by Dr. Giles S. Mitchell.

Plaster of Paris as a Means of Filling Defects in Bone.

Dr. H. Dreesmann in eight cases has filled cavities in bone, of small size, with Plaster of Paris, closing the soft parts over it and succeeded in healing six without fistula. The plaster was mixed with a 1 in 20 carbolic acid solution. The bone cavities after thorough mechanical removal of infected tissue were filled with olive oil and the latter heated by plunging into it the tip of the thermocautery. The practical advantages of the method over decalcified bone implantation seem doubtful, although the earliest cases remained well when last seen six months after operation.—(*Ueber. Knochenplombierung, Dr. H. Dressmann, Beitrage sur Klin. Chirurge* ix, 1893, p. 804.)

Of Interest to Travelers.

The Baltimore and Ohio Railroad announces that they have placed on sale round trip tickets at reduced rates to the Winter Resorts in Florida and the South, and also to such points of interest as Luray, Natural Bridge and Gettysburg. This company has also arranged to place on sale excursion tickets to San Francisco and other points in California on account of the Mid-Winter Fair, at unusually low rates. Excursion tickets are now on sale to Baltimore and Washington via the famous Royal Blue Line.

With its vestibuled train service via Washington to Cincinnati, St. Louis and Chicago, the B. & O. is in the best of condition to handle western and southern travel. That the line is a popular one, is attested by the immense World's Fair business handled this summer.

Those contemplating a trip west or south this winter, should write to James Potter, Div. Pass. Agent, B. & O. R. R., 833 Chestnut St., Philadelphia, Pa., for rates and other information.

THE
MEDICAL AND SURGICAL
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ORIGINAL ARTICLES.

ABSCESS OF THE LIVER; OPERATION; RECOVERY.

G. FRANK LYDSTON, M. D.,* CHICAGO, ILLINOIS.

While abscess of the liver is by no means a frequent disease in temperate climates, it occurs with sufficient frequency to lack the element of novelty, were it not for the fact that an early diagnosis followed by operation and leading to the recovery of the patient is rather exceptional. The history of the case which I am about to relate is interesting in many respects. The patient, a strong, athletic man of 53 years of age, first consulted me on the 20th of May. I had known the gentleman for 10 or 12 years, during which time I had never attended him professionally, and he had never been to my knowledge seriously sick. His history for many years had been that of a healthy man with one exception, which was that during a violent fit of coughing in the course of an attack of so-called bilious fever and pneumonia, thirty years ago during the civil war, he had apparently wrenched himself in the epigastrium. Since that time he claimed that he had been conscious at times of a feeling of weight and soreness in the epigastrium, and from time to time he had suffered from attacks of what had been pronounced gastralgia. These were coincidental with dietetic and alcoholic excesses. He had not been a hard drinker, but would come under the class of so-called temperate drinkers, and his indulgences were usually associated with excesses in eating. These attacks would pass away in a few days. At times they would last but a few hours, and were never followed by jaundice, constipation, fever, or any general symptoms of any kind whatever. About the 13th of May, 1893, he suffered from one of his old attacks, which was rather more severe than any he had previously experienced. The pain was spasmodic in character, very acute, but subsided in about an hour under the administration of morphia. I did not see him in this attack, nor have I ever seen the patient or prescribed for him during similar attacks. After the attack of pain just described he was apparently in his usual health, but his wife had noticed that he tired easily and complained of fatigue on coming home in the evening from his daily occupation.

On the 19th of May he began to feel quite ill. As he described it to me, he was "sick and achy all over." He had a slight chill; he also developed considerable cough, which was of a short hacking character, almost incessant and attended with considerable pain in the right side and in the epigastrium, pain in the epigastrium being especially marked. On the 20th he consulted me at my office. He still suffered from cough, pain in the right hypochondrium and epigastrium, with severe exacerbations on coughing; still complained of feeling very much prostrated; pains in his bones and muscles. He presented an expression of distress, and in general looked like a very sick man. His temperature was 102.5°; pulse 110; there was tenderness over the liver; some tenderness over the entire abdomen. The epigastrium seemed to be the focal point of tenderness; the bowels were constipated. Examination revealed a slight bronchitis. He endeavored to repress his hacking cough on account of the pain in the right hypochondrium and epigastrium. I gave him at this time a mercurial cathartic and a capsule containing three grains of phenacetine, 5 grains of salol, and two of quinine, to be repeated every three hours. I instructed the patient not to return to his place of business, but to go home and go to bed, and if he were not feeling better in the morning to send for me. I was not sent for until the afternoon of May 21st. At this time the pain was still marked in the epigastrium; cough quite annoying; there was an obscure sense of fullness in the epigastrium which he referred to his "stomach." He insisted that this fullness was due to somethat was lodged in his stomach, the removal of which would cure him immediately. He stated that he had the same sense of oppression in the epigastrium that he had for a good many years. The temperature was now 103.5°; pulse 120; there was considerable meteorism. On the evening of 21st the temperature as 103°; pulse 108. No antipyretics had been given at this time. On May 22nd meteorism increased; morning temperature 102.4° pulse 120; evening temperature 104°; pulse 130; very moderate use of antipyretics; the symptoms otherwise the same as on the previous day with the exception of the increase in the meteorism.

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May 23rd. Morning temperature 103.5°; pulse 120; evening temperature 102°; pulse 118; stopped the antipyretics. The tongue was now dry and brown; the tongue, lips and teeth were covered with sordes; a decided inclination to somnolency; pain in the hypochondrium and epigastric pain not so marked; cough less prominent; still some tenderness in the epigastrium.

May 24. Morning temperature 100°; pulse 110; evening temperature 101°; pulse 120; somnolency increased.

On the 25th, A. M.. temperature was 101°; pulse 114, very intermittent and irregular. Evening temperature 101°; pulse 114; cough somewhat better. Some cerebral excitement. Ice bags were applied to the sides of the neck and to the cranium; no antipyretics were administered. The pulse was so alarming that digitalis was administered. Icterus was now noticed for the first time.

May 26th and 27th. Temperature 99.4°; pulse 108 to 120, and showing the beneficial effect of the digitalis. Pain and tenderness over the hepatic region improved; cough still better, but more or less painful; drowsiness has increased, and the patient has become more or less incoherent.

Until May 24th I considered that I had to deal with a case of typhoid. The early appearance of sordes, the dryness and dark color of the tongue, the peculiar character of the pulse and a sudden diminution in temperature without antipyretics, taken in connection with the localized pain and tenderness over the liver, now led me to suspect the existence either of a primary hepatitis or possibly some hepatic complication modifying the course of an otherwise typical typhoid. At this time I informed the patient's friends that I suspected an acute abscess of the liver, either as a complication or the essential condition present, and suggested that Dr. William E. Quine be called in consultation. My advice as to counsel was followed, and Dr. Quine and myself accordingly met, and after a thorough canvass of the situation we concluded that a positive diagnosis was at that time impracticable, and arranged for a further consultation 48 hours later.

On the evening of the 25th, after careful exploration of the patient's abdomen, I was confident that I could detect a circumscribed induration in the epigastrium, extending down to within an inch and a half of the umbilicus. There was dullness on percussion, and I thought that a reasonably clear outline of the involved area of resistance could be determined by palpation. To me the diagnosis seemed now reasonably clear in spite of the apyrexia, the temperature being at this time slightly sub-normal. On the evening of the 26th, as a preliminary to the coming consultation, I took my instruments to the patient's house prepared to do a laparotomy should I receive the support of counsel. At the request of the family Dr. Sheldon Leavitt was added to the force of consultants. The final consultation occurred on the morning of the 27th, at which time I expressed my opinion that we had to deal with a circumscribed tumor in the left lobe of the liver with a possible abscess diverticulum of a secondary nature in the right lobe. My consultants agreed as to the probability of pus in the liver, but held that it was in all probability in the form of disseminated abscesses. Counsel agreed to my proposition to use the aspirator. I accordingly aspirated; first over the right lobe, and passing the needle upward and slightly inward toward the median line in the direction of the diaphragm beneath the free border of the rib, pus was struck at the first aspiration. I then aspirated in what appeared to me to be a circumscribed area of induration in the epigastrium, and after several dry taps withdrew a syringe barrelful of what was seemingly sero-purulent material. Much to my discomfiture the eminent gentlemen associated with me in the case asserted that I had aspirated the stomach. As a result of the consultation laparotomy was counseled against. I, however, was not perfectly satisfied and left my instruments at the patient's house. As my consultants had carried the fluid away for examination, I had no immediate prospect of microscopical study of the fluid, but impressed by the urgency of the case, and moreover as my microscope was at my office several miles away, I determined to aspirate again, and during the afternoon of the 27th I called at the patient's house and after the administration of a glass of whiskey and water, colored with several grains of cochineal, I again aspirated in the epigastrium. The appearance and a subsequent microscopical examination in company with my friend Prof. Hektœn, of the fluid which I withdrew, convinced me of the correctness of my conclusions in regard to the case. Accordingly on the morning of the 28th, I called Dr. J. B. Murphy to assist me at the operation, and performed a laparotomy, making a free incision over the area of induration in the epigastrium.

The operation was done under ether anæsthesia with the usual aseptic precautions. On cutting down the median line, and exposing the peritoneum, I found, much to my gratification, that adhesions had occurred between the visceral and parietal peritoneum, thus enabling me to do an extra-peritoneal operation. A large aspirating needle was plunged into the prominent left lobe of the liver which presented at the opening, and on withdrawing the piston the barrel of the syringe was rapidly filled with sero-purulent fluid. The Paquelin thermo-cautery was now pushed into the liver tissue in the direction of the point of the needle, with the result of evacuating a large quantity of pus. The opening was now enlarged with the finger, the abscess cavity thoroughly explored, and it was found to have involved practically the entire extent of the liver and to present a diverticulum running off into the the right lobe. The pus in this diverticulum was much thicker and presented more of the characters of ordinary pus than from the left lobe, which was comparatively thin. I will state for the benefit of those who may suspect that the gall-bladder was opened, that it was at no time exposed during the operation, nor had I any reason to believe that it communicated with the cavity of the abscess. As an illustration of the depth and extent of the abscess cavity, I will state that a pair of Kocher forceps could be passed both to the right and left of the median line clear to the handles without meeting any obstruction.

The cavity was packed with a liberal quantity of iodoform gauze, and the usual dressing applied. On the second day after the operation, temperature was slightly subnormal, the pulse 118, and of excellent vitality; patient still somnolent, and aroused with difficulty. Icterus still perceptible, although not marked. Third day after the operation, an enormous quantity of bile began to pour from the abdominal wound and saturated the dressings; bile continued to flow from the wound in large quantities for two weeks, when it gradually began to subside, and in a few days had practically disappeared from the discharge. There was a free purulent secretion, but no attempt at repair in the open laparotomy wound for practically three weeks, when it began to heal, and at the end of seven weeks it was perfectly closed. The temperature following the operation fluctuated between the normal and a degree subnormal until toward the close of the case, when it assumed a normal standard and remained normal thereafter.

The tongue, lips and teeth continued

to be covered with sordes, which reformed as fast as it was removed for four weeks after the operation. The tongue was dry and brown constantly during this time. At the end of about four weeks, it began to clear up coincidently with the administration of dilute nitro-hydrochloric acid. For several weeks the patient continued somnolent, and was with difficulty aroused. At the end of three weeks somnolency began to alternate with apparent attacks of mania and insomnia. At times the patient was quite violent, and was with difficulty controlled. For about three weeks after his somnolency began to disappear, his mental condition was very bad, so much so that I suspected some latent cerebral trouble, which had developed under the influence of the constitutional disturbance and toxic disturbance of the brain incidental to hepatic disease. At the end of three weeks, during which time he remained in practically the same condition from day to day, I concluded to experiment a little, and administered Hammond's *cerebrin* in doses of five drops, three times daily. I mention this rather apologetically, and not with the intention of making any claims for the cerebrin. Whether as a coincidence or not, however, within forty-eight hours the patient began to improve, and went on improving steadily thereafter until convalescence was completely established at the end of the eighth week the laparotomy. It would by no means be surprising if the cerebrin-so-called were responsible for the improvement. I imagine that nitro-glycerine in small doses would have had a similar effect. Whatever the physiological effect the cerebrin may have—and any one who like myself has tried it upon himself must acknowledge that it has a physiological effect—is undoubtedly due, in my opinion, to the presence of nitro-glycerine; whether as an accidental or intentional ingredient, is of no moment. I will state that about two weeks after the first operation I explored the liver in all directions on two occasions with aspirating needles of large size with a view of searching for possible purulent collections still remaining in the liver. Dr. D. R. Brower, who saw the case in consultation with me about two weeks after the operation, was inclined to believe that the patient's mental condition was dependent upon pus pockets still remaining in the liver, or upon iodoform poisoning. Thorough aspiration failed to detect pus, and the cessation of the iodoform dressings produced no appreciable effect.

The points of most practical interest in this case are, it seems to me, (1) the probable causation of the abscess by an attack of hepatic colic. (2) The rapidity of formation of pus in the liver. (3) Its location. (4) The early period at which the diagnosis was established. (5) The extensive and speedy destruction of the hepatic tissue. (6) The pronounced and prolonged disturbance of the mental faculties incidental to the toxæmia resulting from hepatic disease. (7) The afebrile course of the case after pus had undoubtedly formed. (8) And most striking of all, the recovery of the so old a patient with so serious an involvement and destruction of hepatic tissue.

It is possible that my patient is not through with his troubles, and I have in mind the possibility of the necessity of a cholectotomy and removal of gall stones later on. At the present time, however, his digestion is perfect; he has an excellent appetite, and is regaining his health as rapidly as one could reasonably expect. A few days since I sent him upon a trip to Mackinaw with the hope of a more speedy restoration to health. It is hardly necessary to call attention to the fact that the favorable result in this case was entirely dependent upon the early diagnosis and operation. Every practical surgeon knows the high mortality attendant upon hepatic abscess, whether operated on or not. My case is an excellent illustration of the rapidity with which the hepatic tissue will break down under the mechanical and toxic influence of pus infection, and shows plainly why, in cases which are not early discovered, surgical measures, however skillful, so frequently fail to relieve the patient. How frequently the diagnosis of hepatic abscess is made only upon the post-mortem table every practicing physician and surgeon is only too painfully aware.

Notwithstanding the disagreement between Dr. Quine and myself as regards the desirability of surgical interference, I can but express my deep obligation to him for the valuable assistance which he gave me in counsel. Our difference of opinion was after all, not upon the question of a suppurative process in the liver, but of its circumspection and consequent amenability to surgical interference. Frequent daily examinations and careful observation of the case for some days gave me a manifest advantage, which the surgeon does not always have in cases which are primarily of an essential medical character.

I have not attempted to present the literature of hepatic abscess nor to enter into an elaboration of the foregoing case; either would detract from the practicability of the report, and would certainly add nothing to its clinical value.

COMMUNICATIONS.

DIPHTHERIA.

WM. H. BURR, M. D., Wilmington, Del.

It is certainly very discouraging but yet a fact, that nine-tenths of the stuff which comes under the head of therapeusis in diseased processes, furnished by well meaning practitioners, is the veriest nonsense, thoroughly unscientific and if not productive of harm at least productive of no good. And when anyone for the love of truth undertakes to introduce what he considers a scientific method of treatment, and backs it up with positive practical results, he is simply endured as an unconscious prevaricator.

The above exordium was suggested especially as the result of reading an article on the treatment of Diphtheria.

The treatment of Diphtheria is 1st, a good atomizer, 2nd, peroxide of hydrogen sprayed in the throat every hour in the day time, several times in the night—strength 1-1, 1-2, or 1-3; Tr. Fer. Chloride—plenty of it— gtt. x, up to gtt. xxx, every 3 or 4 hours; Quinine from gr. xij to gr. xxv in the 24 hours; plenty of alcohol and all the nourishing food you can get the patient to take. Follow that out and see how many patients you will have to bury, even of the bad cases. Why any one should want to trifle with antipyrine, digitalis, aconite, gesemium, potass. chlorate, etc., I cannot see, they are of no earthly use except to kill patients.

Any one who allows a genuine case of diphtheria to go over 5 hours from time of inception, without diagnosing it and instituting proper treatment, is criminally culpable, whether there is any deposit in the throat or not. The refinements of diagnosis in all diseases that have not their nature written all over them plainly is a thing of the past. The *diphtheritic pulse* has its peculiarity that is not common to any other disease, and the relation of pulse and temperature is also worth studying.

Who that has ever had any experience would think of confounding the diphtheritic pulse and temperature with that found in catarrhal tonsilitis, bronchitis or scarlet fever. The same objection might be made to the miserable temporizing which is followed in the treatment of its companion disease croup. Here again you will find grave and reverend seignieurs fooling along with trifles such as syrup of ipecac, paregoric, alum and molasses, potass. chlorate, etc., etc., waiting for severe symptoms to declare themselves, each minute diminishing the chances by that amount of time of getting a brilliant result from using scientific treatment. What is the treatment of croup? Corrosive sublimate gr. 1-50 to gr. 1-100, every hour, preferably given in gummy solution and kept up for several days; adjuvants—a little ammon carbonatis and ammon. bromidi early in the disease, and quinine later with perhaps a little opium if the corrosive sublimate has a tendency to gripe. Percentage of recoveries ought to be 100.

THE ERECT POSTURE FOR GYNECOLOGICAL EXAMINATIONS.*

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In accepting the invitation from the Executive Committee of this Association, to present on this occasion a paper on "The Erect Posture for Gynecological Examinations," I wish particularly to impress upon all who honor me by their attention, that my object is rather to elicit than to impart information. To call forth the store of knowledge now latent in the Association ; to ask for the results of your observations, rather than to attempt to add to the knowledge of the members by any contribution of my own. I shall therefore assume the role which has always been my earnest endeavor, namely, to present facts and elicit truth by discussion; also to be sufficiently brief to come within the "ten minute rule."

Digital examination per vaginam with the patient in the erect posture affords me one of the most positive means for diagnosis in gynecology. The horizontal, dorsal, genu-pectoral or knee-chest, semiprone or Sims, and high pelvic or Trendelenberg postures, with the various modifications of the same, are all well urged and abundantly demonstrated by the numerous authors of the present-day literature at our command. But scarce can we find even any mention of the most important posture with which we have to deal, namely, the erect or perpendicular posture. This then is my excuse for presenting this subject for your timely consideration and discussion.

It is a well established fact that respiration, the various movements and attitudes of the body as well as pathological conditions, change the conditions and environments of the viscera. Thus the importance of posturing the patient in making physical examinations in gynecic practice becomes evident. As most of the symptoms of the diseases of the intrapelvic organs are more marked and very many only manifested when the patient is standing, while certain conditions of descent, prolapse or displacement, may entirely disappear or change when the pressure of the superincumbent weight of the abdominal viscera is removed by the patient being placed in the dorsal, semiprone, genu-pectoral, or high-pelvic positions, therefore, the erect posture is of paramount importance as an aid in diagnosis in this field of labor.

In examining a patient lying on her back in the dorsal position, which is the most generally adopted method, and findingsome evidence of displacement it is utterly impossible to accurately determine the degree of the existing displacement without repeating the examination with the patient on her feet. For instance, a patient with a retro-displaced womb, will have the displacement exaggerated in the dorsal posture; whereas a patient with her womb displaced anteriorly will have that displacement lessened if not altogether removed, by the uterus naturally falling backward in both instances. The amount of pressure exercised upon the bladder or the rectum and other posterior structures can be estimated only with any degree of accuracy by having the patient standing. The same holds good in all cases of descent and of prolapsus.

Again a pessary which seems to support a displaced uterus perfectly while the patient is recumbent, may, as is the case in most instances, be found totally inadequate when she rises on her feet. In short, these conditions cannot possibly be certainly determined in any other manner, hence the value and absolute necessity of the erect posture if we would make intelligent examinations and accurate diagnosis.

The examination in this posture is usually made by the patient standing with her back resting against a table or chair placed to the wall or better still, in the writer's experience, by having the patient stand with her back against the wall, and her feet separated about one foot or more. Some examiners prefer the patient to have one foot rest on the rung of a chair. The examiner seated in front and to the right of the patient uses the index and middle fingers of his right hand, with the elbow resting on his flexed knee if he so finds convenient. He first examines with the index finger alone, and whenever he finds it essential inserts the middle finger also, which gives him the advantage of at least half an inch further reach. It will be found of additional advantage to place the two fingers with their palmer or flexor surface posteriorly and thus obtain all possibly utility of the fingers in fully exploring the conditions within the pelvis.

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In conclusion let me emphasize the advantage and necessity of digital examination in the erect posture more particularly in examinations undertaken for the accurate estimation of

1. Displacements of the uterus.
2. Vesical and Rectal Disorders.
3. Lack of perineal and vaginal support.
4. Ovarian and tubal disorders.
5. Abdominal and pelvic tumors.
6. Differentiation between abdominal tumors and pregnancy.

REPORT OF THREE MONTHS' SERVICE IN THE JEFFERSON COLLEGE HOSPITAL.*

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The object of this report is not to include every minor operation, which number over one hundred, but only those which may prove of interest.

One case of fæcal fistula. A young woman, married, two weeks after her first confinement suffered from a strangulated femoral hernia. Her physicians claimed to have reduced the hernia under ether. Subsequently an abscess formed at the femoral ring, was opened, with escape of gas, pus, and some fæcal matter. Four months after she presented herself at the hospital, suffering from an almost constant escape of gas and fæcal matter from a small tortuous sinus below Poupart's ligament. By means of a very small flexible bougie, I was enabled to find the way into the bowel. I cut down on this bougie, following up the sinus until the bowel was reached. As I could feel no spur, I concluded that there was simply a small opening in the bowel. I freshened the edges and closed the wound. Twenty-four hours after symptoms of obstruction of the bowel occurred, with peritonitis, followed by death in three days. A post-mortem examination revealed that, instead of perforation of the bowel with a small opening, a large section of the bowel had been caught in the ring, and at least two-thirds of the circumference had been lost in the slough. The lesson taught me in this case and in other similar cases that I have seen, that the abdomen should be opened in the middle line or outside of the linea alba, in addition to dissecting down through the sinus, in order to find the condition of the bowel and the amount of lost tissue. This was a case for lateral anastomosis.

A second case of abdominal section has the following history: A woman sixty-three years old, was admitted to the ward, suffering with obstruction of the bowels of three weeks' duration. The abdomen was enormously distended, and fœcal vomiting. Incision was made in the middle line below the umbilicus. The intestines were so much distended that it was impossible to locate the seat of obstruction. An incision was made into the small intestines and their contents milked out. This procedure necessarily caused much fæcal matter to be spilt in the abdominal cavity. After reducing the contents of the abdomen the obstruction was easily located. It was a carcinomatous contraction of the middle portion of the transverse colon, with extensive adhesions to the surrounding parts. As it was found impossible to remove the section of bowel involved, an artificial anus was made in the right side. The colon just above the ileo-cæcal valve was attached to the abdominal wall and, as the symptoms were urgent, immediately opened. The peritoneum was so tender and brittle, due to inflammatory infiltration, that it was with great difficulty that sutures could be made to hold. The same difficulty was encountered when I attempted to close the opening made in the small intestine. The parts were so thickened that it was almost impossible to invert the intestinal walls for the Lembert sutures. The intestines were returned with great difficulty into the abdominal cavity, which was then thoroughly irrigated. The patient rallied from the shock promptly. Her temperature did not go beyond 101° F. She improved daily, and left the house in four weeks almost as well as she was before the obstruction occurred. The carcinoma had given her but little trouble before the obstruction, not sufficient to cause her to call for medical advice.

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* Read before Philadelphia Academy of Surgery, October 2, 1893.

A third abdominal section was for ligation of the external iliac artery for an aneurism involving the femoral under and beyond Poupart's ligament and a large portion of the external iliac in the abdominal cavity. The patient was a male, aged forty, and in good health. I determined to do the trans-peritoneal operation. The artery was tied without much difficulty by placing the patient in the Trendelenburg chair and packing the bowels away from the point that I wished to place the ligature, with large pads of antiseptic gauze. The patient made a good recovery, and left the hospital cured. As I shall report this case more fully in another paper, I have purposely omitted much of the technique of this operation. I had two years previously ligated the femoral artery of the same limb.

Two Cases of Amputation of the Penis for Epithelial Cancer.—In one case the glands in the left groin were involved, which were removed with much difficulty. The left limb was very œdematous, due to pressure of the enlarged gland on the veins. The difficulty of removal was due to the proximity of those glands to the veins. The patient made a satisfactory recovery.

Five cases of Hydrocele were operated upon by the open method. That is, the sacs were incised for about one inch; the edges of the sac caught with hæmostatic forceps to prevent difficulty in getting into the proper cavity. After the cavity is thoroughly dried with antiseptic gauze, pure deliquesced carbolic acid was applied to every part of the serous membrane. Then an iodoform gauze drainage was inserted and left for forty-eight hours. Should the incision be larger than necessary a few catgut sutures can readily be introduced, to partly close the opening. The drainage which this mode of procedure admits of insures absolute success. Anæsthetics are not necessary, as the line of incision can be frozen with chloride of ethyl, and the application of the acid or any other caustic causes no more pain than when injected. Those cases, where the sac is very thick and cannot collapse, or where covered with calcareous plates, are not adapted for this mode of treatment. Only entire or partial excision of the sac will cure that class of cases. The operation of laying open the sac and attaching it to the scrotum, and then packing, I never perform on account of the subsequent deformity.

Three Cases of Varicocele with Elongated Scrotum.—I have ceased to perform the operation by the subcutaneous method. Both of these cases were operated upon by the open method, and a section (one inch) of the veins removed. The tied ends are then sutured together with catgut, which insures the shortening of the scrotum. Catgut is also used for ligatures of the veins. The most satisfactory way to reach the veins is to transfix the tissues with knife or scissors, each side being lifted with forceps as the gynecologist approaches the peritoneum. It can be done rapidly and without danger of wounding the vein. With proper antiseptic precautions and properly sterilized catgut the patient will make a more rapid recovery than with the subcutaneous method. I never use drainage, but close the serous membranes with catgut and the skin with silk.

One Amputation of the Forearm for Epithelioma of the Wrist, which almost encircled the Arm.—For two years this patient had submitted to the application of caustics from a cancer-curer until the pain became unbearable. The wound healed by first intention, not a drop of pus having been seen. But the pain in the arm never ceased. A multiple neurosis followed the local one after the patient left the hospital, and the patient died eight weeks after the amputation. Alcoholism could not be ascribed as a cause.

Was it the continued use of the caustic applications, which several times caused sloughs, so the patient informed me, that caused exposure of the bones and the tissues between the bones.

Four Cases of Amputation of the Thigh; one for Sarcoma springing from the Periosteum of the Thigh Bone about the junction of the Upper with the Middle Third.—The tumor measured twenty-eight inches in circumference and approached the joint so far that an amputation of the hip was thought proper. Wyeth's pins were inserted and the rubber band applied. The flaps were cut for hip amputation, but when the bone was reached it was found in such good condition that the head was not removed. The patient made an excellent recovery and gained much flesh. She was seventy years old and much broken in health when admitted to the hospital. The second case of amputation was for a chronic syphilitic endostitis and necrosis of the lower end of the femur, with an old synovitis of the knee-joint, in a man forty-five years of age, and in an almost exhausted condition. The amputation was made at the junction of the upper and middle third of the thigh. The marrow was soft, almost fluid, and entirely disorganized, and it was not deemed proper to leave it. As the bone seemed healthy I curetted up as far as the trochanter major, and packed with iodoform gauze. The patient suffered very much from shock during and after the operation, but from that time on he improved daily without a single untoward symptom until entire recovery. The third case was that of a man aged thirty-three years, admitted to the hospital suffering from acute gangrene of the left leg. His history was that three weeks previous he had a second attack of an apparent appendicitis under the care of my friend W. L. Coplin. The pain, however, soon subsided in the right iliac region, but severe pain was felt down the left leg. The pain was excruciating, and could scarcely be controlled by large doses of anodyne. Soon after the pain began it was noticed the discoloration of a linear character occurred. It followed the course of the superfical nerves and apparently involved only the skin. Soon gangrene of the entire limb occurred, with great depression of the nervous system. A line of demarcation formed above the knee, and an amputation was advised. The limb was removed at about the middle third of the thigh. The operation was followed by great shock. Very little blood was lost. He rallied for a few days, when gangrene commenced in the right limb. At the same time was noticed that there was no perceptible pulsation in the left radial artery. He sank slowly and died at the end of ten days from an extensive gangrene of the right leg. His previous history was not good. He suffered from chronic alcoholism. He did not suffer from disease of the valves of the heart, but from a fatty heart. An embolus was the apparent cause of the gangrene. The fourth case was that of a boy aged twelve years, who previous to this illness, never was sick. April 1st he commenced having pain in the left knee, and was treated for rheumatism. Soon the swelling involved the knee-joint as well as the whole leg below. His case was then supposed to be one of acute cellulitis, although there was no history of injury or any previous abrasions. He was admitted to the hospial, and several openings were made in the leg and large quantities of pus evacuated. His temperature fell for a few days, but soon arose to 103°, and the boy was slightly delirious. Then it was found that the joint itself was involved. It was opened and a large quantity of puro-sanguinolent fluid escaped. Still the temperature continued above normal, and the boy was still delirious. Other pockets of pus were looked for and opened. Bedsores were threatened and his condition grew worse. At the third operation it was discovered that the boy suffered from epiphysitis of the tibia. Necrosis at the epiphysis had occurred. As the knee-joint was disorganized and the leg from the ankle to the knee was one mass of suppuration, an amputation was advised and accepted. He bore the amputation well, and almost from that day his delirium ceased. The wound healed promptly without suppuration. Very little is said of epiphysitis in the text-books. I think this disease occurs more frequently than we are aware of, though suppuration and necrosis are very rare. I have the history of three other cases, though the symptoms were of a much milder type than the case just mentioned.

One case of Floating Cartilage of the Knee-joint.—This I will exhibit to you, and I think you will agree with me that it is one of the largest. Its dimensions are 1½ x ¾ inches.

The man, aged forty-five years, suffered for many years with what he supposed to be rheumatism in his left knee. It had never impeded his locomotion very much. For a long time it must have been too large to impinge itself between the tibia and femur. Its position was on the left lateral aspect of the knee-joint. I cut freely down on it and removed it without difficulty, as it was not attached to any of the fimbriæ of the synovial membrane. Considerable synovial fluid escaped. The synovial membrane was closed with catgut sutures and the skin as usual. No drainage was used. He made a good recovery without anchylosis.

One Case of Neurectomy of the Infra-orbital Nerve in a Lady of Seventy-three Years, who had Suffered Many Years from Neuralgia.—Three years previously I had removed the inferior dental nerve for her, with relief for two years. I removed the entire nerve by a trephine opening at the angle of the jaw to the mental foramen. After two years the pain returned in the infra-orbital nerves. This was removed by making a V-shaped notch in the lower border of the orbital bone down to the foramen. By that means I am sure to secure the nerve with all its filaments. Then lifting up the eyeball with a retractor and breaking through the thin floor of the orbit, I was enabled to break off the nerve as far back as its origin. Very little deformity follows the removal of the wedge-shaped bone. It is now five months since the operation, and there has not been any return of pain.

One Case of Amputation of the Tongue.—Male, aged seventy-three years. He suffered for many years with papiloma of the tongue, shown in small white plaques. These were partly removed by transfixing with fine needles and tied off. When admitted to the hospital about one-third of the tongue was infiltrated. It was twice its normal thickness, very hard and painful. The glands at the angle of the jaw were also involved. The tongue was transfixed near its tip, and a strong ligature drawn through to give control of it. The patient was placed in a Trendelenburg chair and the head so depressed that no blood ceuld enter the trachea. After etherizing, chloroform was used during the operation. Those who have not used the Trendelenburg chair for operations about the face, nose, and fauces can scarce appreciate its usefulness in preventing suffocation from blood entering the trachea. It prevents the many interruptions to the operator on account of that accident. It does away with the necessity for tracheotomy. With the tongue elevated and pulled strongly forward it controls hemorrhage, as suggested by Heath. Then, with a pair of scissors or a knife, the mucous membrane is divided in a smooth, even, curvalinear line at the junction of the tongue with the floor of the mouth. The object of this line is for the subsequent attachment of the upper portion of the tongue to it. After the tongue was freed as far back as necessary ablation was commenced. With a pair of scissors the tongue was divided by a series of snips until one of the lingual arteries was reached, when it was quickly caught and tied. The pulling forward of the tongue so controlled hemorrhage that but a few drops of blood escaped. Before the next artery is reached another ligature is drawn through the stump, that it too may be under control when the tongue is divided. The stump is then brought forward and sutured to the mucous membrane of the floor of the mouth. By this method there is very little surface exposed for absorption of septic material and the prevention of septic pneumonia greatly enhanced. This patient was fed with a tube attached to the nozzle of the feeding cup, and by that means the food was placed far back in the fauces and did not come in contact with the wound. The enlarged glands were removed, exposing the large vessels of the neck. The patient made a rapid recovery. The stump and floor of the mouth united rapidly, and in six days all the sutures were removed. He suffered much from shock after the operation, but soon rallied. About half of his tongue was removed.

One Case of Resection of Knee-joint in a Female aged Twenty Years.—Had suffered for ten years from traumatic synovitis. Her general health good. No history of tuberculosis. When the joint was opened an inflammatory erosion of the entire joint surface was found. The ends of both tibia and femur were sawed off. Temporary fixation of the bone was made with catgut sutures and a plaster splint applied. Recovery satisfactory. She left the hospital in eight weeks with a good union. Had her to continue to wear a light splint a few weeks longer.

Four Amputations of the Mammary Gland for Scirrhus.—In each case the axilla was opened and all its contents removed. Fat was removed, regardless of the fact that in two cases no enlarged glands could be felt. Yet in both cases, when the axilla was opened, minute glands could be distinguished in the fatty material removed. I operate on all cases of carcinoma of the mammæ where the disease has not so far advanced that its removal is impossible. This rule applies to chronic or fibroid scirrhus as well as to the acute variety. I feel it is more beneficent to the patient to let her die of internal cancer than to die of exhaustion due to local ulceration, with all its physical and mental distress. However much confidence the patient may have in her family doctor, who advises her not to have it touched with the surgeon's knife, sooner or later she will disobey his instructions and consult a surgeon, or else fall into the hands of the cancer doctor, with his escharotics. Which of us causes the greatest physical suffering?

Five Cases of Hare-lip.—One of the cases simple. Three of the cases with cleft palate, both hard and soft, and one case with double cleft, with intermaxillary bone projecting. In this case I removed the inter-maxillary bone, believing, with Rose, that it interferes with the proper approximation of the lateral maxillary bones. The teeth that form in it are never perfect and are ever useless. I do not use hare-lip pins in approximating the parts, but use silkworm-gut, both at the vermilion border and at the cutaneous surface. I use either catgut or silk sutures for the intervening parts and the mucous membrane. The advantage of the silkworm-gut over pins is that it can be left in longer without cutting or sloughing and supports the parts equally as well. I never operate on a child under one month of age. There is no necessity for it, and union is much less certain.

Four Cases of Supra-pubic Cystotomy.—One case of chronic cystitis of ten years' duration, with a small phosphatic calculus. One case of a foreign body in the bladder, part of a soft catheter, and two cases of stone in the bladder. The specimens I now exhibit. The largest stone is from a male patient aged sixty-one years. Occupation, bookkeeper. He suffered for six years with all the symptoms of stone, but his sedentary habits made it endurable until a few months before he was admitted to the hospital. The stone weighs five ounces and is 7$\frac{7}{12}$ inches in its greatest circumference. It is smooth, and to that fact is probably due his long tolerance of it. It is probably a uric acid calculus with a phosphatic crust. I was formerly prejudiced in favor of lateral lithotomy, as I had always operated by that method. Now I am convinced that in adults the proper treatment is either supra-pubic cystotomy or lithotripsy, the choice of treatment depending upon the size of the stone or the condition of the bladder and kidneys. I have never crushed a stone in a young child, yet I think it the proper treatment.

Faith in Medicine.

There is virtue in drugs properly administered, but faith cannot be put aside. Faith serves the oculist as well as the physician. A few days ago one of our patients an intelligent gentleman, called to have his lenses changed since they were paining his eyes very much on use. In due time the new lenses came and the old lenses taken out, but by mistake the same old lenses were put back in the frames. He put them on and said they were a great improvement on the old ones. When at home he told his wife everything looked so much clearer with his new lenses, and they were so easy on his eyes. In a short time the mistake was noticed and he was telephoned to come to the office, when it was explained to him how the mistake was made, and the new lenses were put in. The joke was to good; he had to tell his folks. He is now firm in the belief that faith has a wonderful effect over the body.

In renal colic we are in favor of using atropia in connection with the morphine injection. The atrophine, it is true, counteracts the effects of the morphine to a certain extent, but both are anodynes and it is much safer to use the atropia with such large doses of morphia as are usually required in such cases.

SOCIETY REPORTS.

PHILADELPHIA ACADEMY OF SURGERY.

Meeting October 2, 1893.

CARBOLIC ACID USED IN FULL STRENGTH IN SURGERY.

OSCAR H. ALLIS, M. D., PHILADELPHIA.*

Surgeons in early days of antiseptic surgery attributed their success to carbolic acid. As introduced it was employed in a dilute aqueous or oleaginous solution. For a time it was the sole antiseptic. To-day it is mainly used in general surgery as a bath for surgical instruments. Few surgeons will demand a reason for its abandonment. Few have not personally experienced its benumbing effects, and have thus been able to assign the collapse following its employment to something different than loss of blood, shock of operation or anæsthetic.

With such an experience of carbolic acid in its dilute form I confess that I was quite astonished to learn from my friend Dr. B. F. Gardner, of Bloomsburg, that he was in the habit of using the article in its full strength upon extensive cut surfaces, and that, too, with the happiest results. As this article owes its entire value to Dr. Gardner, I will give in detail his method.

When Lister introduced his paste Dr. Gardner used it quite extensively. After an application to quite an extensive wound surface he was surprised to find it turn white, and that he had used pure carbolic acid. He therefore immediately washed the surface and dressed the wound, keeping it open until oozing had ceased. The case did so well that it inaugurated with him a line of treatment that he has exensively employed. As a typical application let me take an amputation of the female breast. After its removal and the ligation of the bleeding vessels carbolic acid crystals, dissolved in sufficient water for solution, are applied with a sponge to all parts of the cut surface. Immediately upon the application of the acid the tissues turn white, which is a guarantee of its thorough action. The wound surface is then washed with water previously sterilized by boiling, and then approximated with provisions for drainage. This is especially necessary, as for twenty-four hours the oozing must find ready exit. During the first few days there is a slight local hyperemia along the borders of approximation, but this declines without crisis.

Dr. Gardner claims for carbolic acid applied in officinal strength:

1. That no systemic absorption attends its use, and hence no danger, no shock.
2. That it is a local anæsthetic. Hence there is not as much pain after the operation.
3. That it is in a measure a hæmostatic, acting especially upon the capillary vessels.

I have taken the removal of the mamma only as an illustrative case. In all operations outside of the pleuritic and abdominal cavities, such as amputations and resections, Dr. Gardner resorts to it.

In hydrocele he lays open the sac freely, then applies carbolic acid to the tunica vaginalis, and concludes with packing or drainage. The operation is not followed by excess of any kind, and recovery is prompt. He has used it in gunshot wounds of the knee and ankle. If he gets such a case after suppuration has set in he freely opens the joint, applies the carbolic acid to every part, washes out all excess freely, secures ample drainage with fixation, and confidently awaits the result. Anchylosis may follow, but this will depend on the extent of the injury, the delay in treatment, the conduct of the patient. Dr. Gardner has used bichloride of mercury, hydrogen peroxide, iodoform, etc.; none of them has answered the claims made for them; all have disappointed him, but pure carbolic acid *never*.

I have said that Dr. Gardner does not use this upon serous membranes *i. e.*" within the abdomen. I must modify this statement. In a case of strangulated hernia, in which he found patches of sphacelus—not deep, but threatening—he cautiously applied the pure acid and returned the gut. Fortunately the strangulation had been arrested by operation in time to save the gut. Nothing eventful in the subsequent history, which was speedy.

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* Surgeon to the Presbyterian Hospital.

I do not know Dr. Gardner's theory of the actions of this powerful drug, and shall attempt no explanation. The turning of the wound surface white is due probably to the coagulation of the albumin of the tissues and fluids of the wound surface, and not that the acid has a necrotic effect. That it does not produce a true destruction of tissue may be inferred that after a large breast or thigh amputation he will have primary union and no suppuration. In its use in hydrocele a half drachm or more is injected into the tunica vaginalis, and resolution without suppuration ensues. It is possible that by its action upon the wound surface an action similar to that obtained by heat may be produced, and thus facilitate repair.

I will conclude this article by briefly stating my experience with it.

On entering the wards of the Presbyterian Hospital I found that one of my amputations of the thigh had not done well, and looking at the stump found it swollen and of an angry threatening character. The seam of approximation was perfect. I therefore removed all the sutures, and separating the flaps found them almost in a stage of gangrene. Taking carbolic acid, pure, I applied it freely, pressing it into the tissues with the sponge applicator, removed the excess, and, packing the space between the flaps renewed the dressing. This was done without anæsthetic and without apparent pain. The exposed surfaces soon began to granulate, when they were approximated and recovery soon followed. I have also frequently applied it upon a carrier with cotton to sinuses and after curetting glands.

DISCUSSION.

Dr. H. R. Wharton: I would like to ask if Dr. Allis has seen carbolic acid poisoning from the use of the agent in this way. I have never seen much trouble from the use of carbolic acid except in children. At the Children's Hospital I have seen two or three cases where its use has produced a marked constitutional effect. In one instance where a large nævus was dressed with carbolic acid application there was a dark-colored urine and other symptoms of poisoning.

Dr. William J. Taylor: I think the application of pure carbolic acid to a fresh, clean surface, such as is left after the removal of the breast, is totally unnecessary. If you have a thoroughly clear skin, clean instruments, ligatures, and hands, you will have primary union. If such a fresh surface is smeared with carbolic acid there will be a large amount of oozing. My experience with a few cases where strong carbolic acid solutions were used a number of years ago was that healing was much retarded.

As an application to suppurating surfaces such as Dr. Allis speaks of, and where you wish a cauterizing and disinfecting action, I consider carbolic acid one of the best agents that we have, and use it frequently.

Dr. W. Joseph Hearn: If carbolic acid is applied to a raw surface, otherwise healthy, one would expect to have a certain amount of necrosis of the tissues. Some cells will be destroyed, and afford a soil for the propagation of germs.

Dr. Richard H. Harte: Dr. Levis was in the habit of using carbolic acid for its cautery effect. I remember several cases where he used it freely, producing large sloughs over the posterior surface of the thigh.

Dr. Allis: In regard to poisoning Dr. Gardner claims immunity from poisoning from the fact that the application sears the whole surface and closes the small vessels, and nothing is taken into the system. Dilute solutions are rapidly taken up. In one case where I operated on two herniæ in the same individual there was a good deal of collapse following the use of a dilute solution of carbolic acid. I am not prepared to say whether it has a necrotic action or not. I do not understand how Dr. Gardner gets primary union using it as he does if it has such an action.

I think that Dr. Gardner probably began its use with the idea that there might be left after amputation of the breast some cells which it would destroy. I do not bring this forward thinking that anyone will be led to use it in these cases, but there is a big lesson in this use of carbolic acid. There are places where it is valuable, for instance, in deep sinuses and pus tracts. I have injected it into a psoas abscess so that it would run out—probably eight ounces—without the slightest constitutional effect.

I can subscribe to what Dr. Harte says. Care must be taken that the carbolic acid does not come in contact with the skin. If it touches the skin it will blister it, but when applied to a raw surface it does not have the effect which we should expect. In a few cases where it had been injected into the tunica vaginalis the patients have almost died, but in a large majority of cases carbolic acid pure in hydrocele effects a happy cure and without suppuration. Hence without necrotic action.

In collecting some cases of accidents in the treatment of hydrocele such cases were reported to me.

As to whether or not the application in recent surgery is necessary or advantageous I leave that for individual opinion. I have seen bichloride solution do as much mischief as carbolic acid probably could do in preventing primary union.

Dr. L. W. Steinbach: In speaking of the use of carbolic acid Dr. Levis has been referred to. A number of years ago I had the pleasure of assisting Dr. Levis in the removal of an ovarian cyst in private practice. At that time the spray was used. The assistant who had charge of the spray put the carbolic acid in the bottle and the water on top of it without mixing the two, so that a spray of pure carbolic acid was delivered into the wound and on to the operator's hands. The doctor's hands became so benumbed that he was unable to introduce the stitches. The woman, however, made an excellent recovery.

Of course every one knows the good success of Dr. Levis in the treatment of hydrocele with carbolic acid. He was careful that none got into the connective tissue or on the scrotum. I never saw an accident in any of his numerous cases.

Dr. W. Joseph Hearn read a "Report of Three Months' Service in the Jefferson College Hospital." See page (855).

DISCUSSION.

Dr. O. H. Allis: I would ask Dr. Hearn if he has seen any sloughing in the cases of hydrocele where he has used carbolic acid?

Dr. William J. Taylor: I had the pleasure of seeing Dr. Hearn operate in the case of intestinal obstruction referred to. I never had seen such distension of the intestine. The small intestines were larger than the average colon, and the tissues were so soft that the sutures tore out. It is simply a miracle that the woman survived.

Dr. W. W. Keen: It is impossible to refer in detail to the five series of cases which Dr. Hearn has reported from a service of eight or ten weeks, but there are two points to which I wish to call attention. One is the use of the Trendelenburg posture in all cases of operation about the mouth and nose. A preliminary tracheotomy has often been advised and has been done in these cases. Of course, tracheotomy is not one of the most serious operations, but it does add to the complications. As Dr. Hearn has said, I believe that the use of this position will practically do away with preliminary tracheotomy in most cases, and always if the tracheotomy be for the purpose of preventing blood entering the larynx and lungs.

I notice also with much pleasure that Dr. Hearn has drawn attention to the importance of uniting mucous membrane after removal of the tongue. I think that this is of great importance in order to avoid as far as possible any opportunity for septic infection. In removal of the lower jaw in a number of cases I have endeavored to unite the mucous membrane so as to cover in the raw surface entirely. If we do that there is no opportunity for infection of the system.

These two points in the surgery of the mouth are of great importance, and it is only in late years that I have recognized their importance; but experience has taught me the immense benefit to be derived from these procedures.

Dr. Hearn: In reply to Dr. Allis, I would state that I have never seen sloughing from the use of pure carbolic acid. In one case, where the surgeon introduced a dilute solution, sloughing followed, and a few days later the testicle could be seen. Where I have used pure carbolic acid I have never seen any accident. I have always injected it until I began this procedure of opening the sac. I have never seen the latter operation fail. The opening permits thorough drainage and is sure to succeed.

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SATURDAY, DECEMBER 2, 1893.

EDITORIAL.

THE REAL VERSUS THE IDEAL IN THE PRACTICE OF MEDICINE.

It is said of the late Sir Andrew Clark, whose death the entire profession deplores, that he frequently asserted his intention to "die in harness," and the impression prevails that he died practically from overwork. His devotion to his profession was intense; the performance of his duties most consciencious; his success remarkable; his popularity amazing. It is said his common-sense was equal to his skill, and he must have known that he was doing too much for safety.

It might be a question of abstract ethics whether or not this purpose was, in his case, justifiable, but the vast majority of physicians the world over, who have reached the same period of life, have no choice but to "die in harness." The *London Spectator*, anent this subject, says: "Of all the social changes of our time, this one—the increasing reluctance of professional and business men to retire from active work—is probably the most marked. The old idea that a man at sixty ought to be content with his gains and stop work has, except as a basis for official schemes of compulsory retirement, utterly died away.

Three distinct changes have operated together to make a grand alteration both in opinion and in practice. In the first place, the health of the cultivated has improved, especially in the later years of life, so much, that work can be done, and done well, by men of seventy, which, only half a century ago, men of sixty would have hesitated to undertake. The judgment is as clear, the insight as keen, and the power of absorbing new facts nearly as great as ever. The cultivated are old, in the ancient sense, at seventy-five, and feeble at eighty, that is half a generation at least later than used to be the case. In the second place, the idea of the duty of "making one's soul" in idleness has died out of moral teaching, and the pious think that they can reflect and pray and repent all the better because they are not consumed by ennui or tormented by the rather inane chat which is apt to become the occupation of the 'retired.' And in the third, it is far more difficult than it was to be careless of professional gains. Business men occasionally make more than was at all frequent in the forties, but professional men do not, and the decline in the rate of interest obtainable for savings has cut their fortunes in two. They cannot get 3 per cent. clear where in 1840 they could get 5 per cent., or even, with courage and a little luck a secure 6 per cent."

These social conditions unfailingly react on younger men. Opportunities for success early in life are less often presented; prospects of securing a respectable living are diminished; considerations of marriage and family must be postponed until later in life—although the physical development of the individual is not at all modified. In general, the younger generation has to wait longer for all things or be regarded as presumptuous for aspiring to a better estate.

These conditions never enter into the calculations of the youth who are flocking to the medical schools, most of whom would be at a loss for a sufficient reason if asked the motive impelling them to the study of medicine. According to the *British Medical Journal*, "there are two answers to the inquiry which are commonly suggested. The practical one suggests that, as in the great majority of cases it is imperative for the candidate to choose some method of earning a livelihood, he may possibly succeed better as a doctor than in anything else. The other, which can never be out of date, and of which the tradition renews its vitality in the introductory addresses at the opening of the medical schools, has for its basis the devotion to humanity and the enthusiasm of doing good. Probably only a very small proportion indeed of those who enter the medical schools will do so simply as an act of self-sacrifice on the altar of humanity in the concrete, or of science in the abstract, and we may, at any rate, confine our attention and address our remarks to those why simply seek a means of livelihood in an honorable and interesting profession. There is a legend in an ancient Buddhist manuscript of the early days of the physician of the Gotama Buddha, whose name was Jiwaka, which puts the case for the aspirant for medical honors very aptly for our present purpose. It having become necessary for the youthful Jiwaka to select a profession, "he considered the character of the eighteen sciences and the sixty-four arts, and determined that he would study the art of medicine that he might be called doctor, be respected, and attain to eminence." If we assume that the student selects our profession in order that he may "be called doctor, be respected, and rise to eminence," we shall probably have a very fair and a very proper answer to the question, what impels so many to enter the portals of medicine?

GEIGEL says that more illegitimate than legitimate children suffer and die from diseases of the alimentary canal, but that more legitimate children die of diseases of the respiratory tract. Bad food and irregularity of feeding accounts for the former, and coddling and keeping them in doors—in other words, over-care—accounts for the latter. The more intelligent class of people are remedying this defect to a great extent as well as the reform in dress.—*Ex.*

SICKNESS at stomach with coffee ground vomit in either acute disease or low forms of fever is a grave symptom. But a careful inquiry should be made of nose bleed or of blood found on the handkerchief after blowing the nose, especially in the mornings. With a history of blood from the nose, the chances are it came from the posterior nares and passed down the œsophagus into the stomach during sleep.—*Ex.*

In case of poisoning by any of the preparations of opium, atropine is the antidote. It is safe to inject hypodermatically from one-sixtieth to one-thirtieth of a grain at one dose in the beinning.

BACTERIOLOGICAL NOTES.

THE EXISTENCE OF PATHOGENIC BACTERIA IN THE UPPER AIR PASSAGES OF MAN AND HEALTHY ANIMALS.

In 1880, Sternberg demonstrated the presence of bacteria in the saliva of healthy men, that were capable of producing a rapidly fatal septicæmia in rabbits and which have since been found to be the cause of pneumonia in man. Almost simultaneously this organism was discovered by Pasteur, whose publications of the discovery preceded Sternberg's by a few months. In 1891, Smith (*Cause and Prevention of Swine Plague, Department of Agriculture,* p. 107) was led to an examination of the secretions from the mouth and posterior nares of apparently healthy swine for the purpose of determining whether or not bacteria could be found in the floor of the upper air passages that were identical with or similar to those found apparently as the etiological factor in the diseased lungs of animals suffering from swine plague. The result was positive as bacteria not distinguishable from those of virulent swine plague were found in the nose, mouth and larynx of a certain number of healthy swine. This discovery was of much importance in explaining the source of swine plague bacteria in the isolated or sporadic cases of the disease where an infection from without could not be explained on account of the nature of these bacteria which are rapidly destroyed by drying, or when placed in water or under other conditions unfavorable for their development. In an appendix to this report Moore recorded the results of a few preliminary examinations of the secretions from the upper air passages of certain other domesticated animals which were made for the purpose of determining the extent of the distribution of these bacteria. In these investigations he found in the mucosa of the upper air passages of a certain per cent. of such animals as cattle, cats and dogs, bacteria which could not be differentiated from the swine plague germ.

Fiocca (*Centralblatt f. Bakteriologie u. Parasitenkunde,* XI 1892, p. 406), reports the discovery of a pathogenic bacillus in the saliva of cats and dogs which resembled the bacillus of rabbit septicæmia, but of only one-half its size. He believed it to be the germ of *la grippe.* In the light of more recent investigations it is presumable that this germ belongs to the swine plague group of bacteria.

Moore has recently (Bulletin No. 3, Bureau of Annual Industry, Department of Agriculture, 1893, p. 58), published the results of more extended observations in which he has found that pathogenic bacteria which for the greater part belong to the swine plague or pneumonia group of organisms, are present apparently in their normal habitat in the upper air passages of 48 per cent. of pigs, 80 per cent. of cattle, 50 per cent. of sheep, 16 per cent. of horses, 90 per cent. of cats, and nearly 30 per cent. of dogs. The secretions from the air passages of rabbits, guinea pigs, fowls, turtles and frogs were also examined, but with negative results. This result is of considerable interest as there are several cases reported of disease in rabbits, fowls and guinea pigs, in which bacteria not distinguishable from the swine plague germ, have been found associated apparently as the causal factor in the lesions produced.

Another and most interesting feature of their observations is the very large percentage of cats that are normally infected while these animals are insusceptible to these bacteria when inoculated with large quantities of a pure culture. It should be borne in mind that the bacteria resemble very closely the pneumonia germ, (*Micrococcus lanciolatus*) in man, in their cultural character and in their effect upon the smaller experimental animals.

In addition to the pathogenic bacteria other forms were isolated which at first were destructive to mice or rabbits but later exhibited no pathogenic properties whatever. The method employed was the subcutaneous inoculation of rabbits with the mucus taken, with great precautions against infection from without, from the mucosa of living or freshly killed animals. In the great majority of cases the mucus was taken from the freshly killed animal.

The practical importance of the presence of bacteria in the upper air passages of man and the lower animals is not clearly demonstrated, but they serve to explain to a certain degree the source of the germs in isolated cares of pneumonia and the occasional presence of toxicogenic bacteria in the diseased organs of animals. The conditions under which these forms of bacteria become destructive to their host is not yet determined, and all that appears to be known is that they exist in the secretions covering the mucosa of certain animals and man, and that these species frequently perish with lesions containing bacteria which can not be differentiated from the germs found on the normal mucous membrane.

The various observations that have been made on the pathogenic bacteria which normally inhabit these mucosa are of much interest in pointing out the possible relations that may exist between these bacteria found in man and animals and the possibility of infection one from the other. Thus far the habitat of these pathogenic bacteria outside of the animal body has not been found although certain toxicogenic bacteria have been found in the soil and in water.

THE WILLIAM F. JENKS MEMORIAL PRIZE.

The third triennial prize, of five hundred dollars, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "Infant Mortality During Labor, and its Prevention."

The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with Obstetrics, or the Diseases of Women, or the Diseases of Children;" and that "the Trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia."

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in a foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., before January 1, 1895, addressed to Horace Y. Evans, M. D., Chairman of the William F. Jenks Prize Committee.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

James V. Ingham,
Secretary of the Trustees.

Arsenic Internally in Cancer.

Dr. Lassar (*Arch. de Ginecol. Pediat.*) was consulted by a patient who presented three cancerous ulcerations of the face, nose, forehead and chin. Histological examination confirmed the diagnosis, and, on account of operative interference being contra-indicated, he prescribed arsenic internally, in the following formula:

Fowler's solution, } equal parts.
Peppermint water, }
Five drops of this mixture three times a day.

At the end of five or six weeks the nasal lesions had healed and the others were undergoing cicatrization. This observation was incomplete, as the patient disappeared from view; but in another case he was able to follow the process of healing, step by step, to complete recovery. On account of these successes he tried it in cases less advanced, and the results obtained were the same in three cases, which presented cancerous ulcers and where the diagnosis was certain.

TRANSLATIONS.

IN CHARGE OF M. B. WERNER, M. D., AND W. A. N. DORLAND, M. D.

MALIGNANT LYMPHOMA.

Dr. F. Fischer reports 2 cases which he observed in the clinic at Strasbourg. The first occured in a man aged 34, and presented the oft described peculiarity of a recurrent pyrexia. The author found in this patient, during two febrile attacks, that the blood contained staphylococci, while it was free from such micro-organisms during the absence of fever.

This was observed at an earlier date in analagous cases by Mayocchi and Picchini and also by Hewelke. The author regards this questionable fever as one to be classed under the head of infection produced by staphylococci, and states that since it was impossible to locate any point of infection during life or at the autopsy, the mouth and alimentary canal must have served as the means of entrance for these micro-organisms.

According to this observation the fever in Malignant Lymphoma, must be regarded as secondary, and not as Ebstein and Pel expressed themselves, namely, that it was a peculiar increase in the infectious form of this disease. The author regards the period of apyrexia as one of immunity after the invasion of the cocci.

Case second. A boy aged 6, who died of tubercular disease of the lungs, having previously suffered of malignant lymphoma. This combination has been frequently shown by other authors.

Though others have considered a direct and near connection between these diseases, the author still declares himself negatively on this point, referring to some experiments on the lower animals, in which the enlarged cervical glands were free from tuberculous matter, even though the lungs and intestines were invaded. Based upon this, F. feels that lymphoma, sarcoma and tuberculosis may run each their separate courses independently in the one patient at the same time.—*Centralb f. Chirurg. No 39.* W.

Trephining for Subdural Hemorrhage.

O. Riegnor reports a case of a child, aged 7½ years, who fell out of a first-story window upon the head; he became unconscious and remained so when admitted to the hospital. During the next 4 days, there were clonic spasms of the extremities; choked optic disc; and slowing of pulse, while consciousness began to return slowly, the patient, however, being unable to express himself in words. A diagnosis was made of an intra-cranial hemorrhage of the meningeal artery. A fissure of about 2 mm. in breadth could be felt in the left temporal region, and it was decided that trephining should be performed at that point. This operation disclosed the presence of a subdural hemorrhage, also that a greater portion of the brain had sustained grave injury. Careful removal of all blood clots and injured brain tissue, tamponing and dressing constituted the operation and resulted in a thorough normal recovery. One and a half years later the author was enabled to perform an osteoplastic operation to cover the defect in the skull, which had in the meantime became larger instead of smaller. This was also followed by good results. The fear that the boy might remain speechless, due to the destruction of brain tissue was not realized, although some time elapsed before he recovered full command of speech. The motor centres of the extremities soon regained their functions after the first operation.—*Deutsche Med. Wochen. 93.* W.

A Case of Poisoning by Lysol: Tracheotomy.

Dr. Roede reports (*Deutsche Zeitsch. f. Chirurg*), a case of a child of 10 months, who had been given by mistake a spoonful of pure Lysol instead of Cod Liver oil. Symptoms of laryngeal stenosis at once set in making it imperative to perform tracheotomy as a means of relief. In spite of all active treatment symptoms of excitation, convulsions followed by stupor, compressible frequent pulse, set in until death closed the scene.

There was no grey swelling nor marked changes in the kidneys. The symptoms of poisoning were similar to those of carbolic acid, except the changes in the urine. The author considered the report of this case a necessity since it serves as a warning against the present theory of harmlessness of the drug. W.

THERAPEUTIC HINTS FROM FOREIGN JOURNALS.

IN CHARGE OF THE TRANSLATOR, F. H. PRITCHARD, M. D.

ITCHING AFTER ERUPTIVE DISEASES.

Dr. Kein (*Medicinische Neuigkeiten* No. 42, 1893) from an extensive series of experiments in polyclinical and private practice, finds that lanolin, with addition of 60 per cent. water, is one of the best means of alleviating the itching of scarlet fever, measles, etc. The formula is as follows:

℞	Anhydrous Lanoline	50 gms. (℥jss).
	Vaseline	20 gms. (ʒv).
	Destilled Water	25 gms. (ʒvj).

Rub in every three hours.

The large quantity of water contained in the salve causes a rapid evaporation of water held in suspension, on the surface of the patient's body, with consequent cooling of the skin. Thus, the capillary hyperemia of the skin is diminished and the itching favorably affected. It is absolutely unirritable, rapidly absorbed, and it is to be used in every stage of the exanthems.

MIGRAINE.

Dr. Freudenberg (*Medicinische Neuigkeiten* No. 42, 1893), of Dresden, has, for the last few years, employed the following formula in migraine, with good results, and he heartily recommonds its trial:

℞	Muriate of Morphine	1 cgm. (gr. 15).
	Salicylote of Soda	
	Phenacetine ......ana	25 cgms. (grs. iv).

Divide into ten capsules.
One to two capsules at a time, until relief.

PRURIGINOUS AFFECTIONS OF THE SKIN.

Dr. Bronson (*La Sémaine Medicale* No. 63, 1893) recommends the following formula in the treatment of itching skin diseases:

℞	Carbolic Acid Crystals	4-8 gms. (ʒj-ij).
	Solution of Caustic Potash.	5 per cent. 4 gms. (ʒj).
	Linseed Oil	30 gms. (℥j).
	Essense of Bergamot	gtts. ij.

For external use.

Dr. Bartholow (*La Semaine Medicale* No. 63, 1893), speaks highly of the following formula in pruritus of the vulva:

℞	Sublimate	40 cgms. (grs. vij).
	Alum	8 gms. (ʒij).
	Starch	40 gms. (℥i ¼).
	Water	1 qt.

For external use.

TREATMENT OF DIPHTHERIA.

Dr. A. Blanchini (*La Semaine Medicale* No. 63, 1893) has obtained excellent results in the treatment of diphtheritic angina in children, by the application of a compress of absorbent cotton, wet in a 5 per cent. solution of carbolic acid, and applied around the neck. They are to be continued until the temperature of the little patient becomes normal, which soon follows. In consequence of the greater sensitiveness of children to carbolic acid it is well to watch the urine in order to interrupt treatment as soon as the slightest signs of carbolic acid poisoning are observed.

Besides these compresses he also gives, internally, the following formula:

℞	Liquid Perchloride of Iron	2 gms. (gtts. xxx).
	Orange Flower Water	200 gms. (℥vjss).
	Simple Syrup	20 gms. (ʒv).

A soupspoonful every hour.

An Italian physician, Dr. Muller, of Belluno, recommends petroleum, in diphtheria. It has been recently praised in follicular angina. He commences by cleansing the throat with a solution of salicylic acid, and, after having detached as much of the false membranes as possible, he applies pure petroleum, locally, every two hours.

BEE STINGS.

Dr. Pedkow (*Muenchener Medicinische Wochenschrift* No. 43, 1893), recommends in stings from bees and other insects rubbing in a few drops of a saturated solution of naphthaline, in vaseline. It is to be repeated every three to four hours.

BROMOFORM IN WHOOPING COUGH.

Dr. Burton (*Muenchener Medicinische Wochenschrift* No. 43, 1893) like Stepp, has employed bromoform in whooping-cough, with very good results. He treated thirty children varying in age from three months to eight years. From the second day, the attacks became less frequent and violent, together with the epistaxis and other hemorrhages, the expectoration was rendered easier and the bronchitis was cured. Only one child, who suffered from capillary bronchitis, died. The dose was one to three dgms. (one and a half to five drops) in children and from a gram, (fifteen drops) to a gram and a half (twenty-two

MALIGNANT LYMPHOMA.

drops) for adults. It was prescribed in a solution of gum tragacanth, syrup and water. Stepp ordered the remedy in doses of five to twenty drops, per diem, and, in the following formula :

℞	Bromoform..............	gtts. x.
	Alcohol....	3-5 gms. (gtts. xlv-ʒjss).
	Water......................	100 gms. (℥iijss).
	Syrup ....,.........	10 gms. (ʒijss).

A tablespoonful every hour.

TREATMENT OF ERYSIPELAS.

Dr. H. Koester (*Wiener Medizinische Presse*, No. 43, 1893) describes a method of treating erysipelas which he has used in fifty cases during the last year, in the hospital at Gothenburg, Sweden. It consists in covering the affected portions and the surrounding skin with a thick layer of white vaseline, by means of a brush. A piece of linen is applied over the whole, in case of the face holes being cut for the mouth and eyes, and this fixed by means of a gauze bandage, with slight pressure. Twice a day new vaseline is painted on and the soaked piece of linen reapplied. The results were extremely good and from comparison with treatment with iodine, ichthyol, sublimate and lanoline it gave fully as good results. The fever fell, in most cases, within two or three days; the sensation of pain and tension in the affected parts soon became less and recurrences were not observed more frequently than with other methods. In some cases the results were astonishing. Patients that one evening came under treatment with a fever of 40° C, were, the next morning, free from fever and the disease had ceased to extend: Though the result was not so striking in all cases the disease was generally limited to the areas first affected. This method is not only indicated in erysipelatous processes upon the skin but it may also be used in case the scalp is attacked. Here it can be employed without cutting the hair. The advantages are its simplicity, its lack of danger, and, for the patient, it is more agreeable than pencilling with iodine, ichthyol or sublimate-collodion, which often cause burning pains and quite severe symptoms of irritation.

CREASOTE IN LATENT TUBERCULOSIS.

Dr. Blanchard (*La Semaine Mèdicale*, No. 83, 1893) has obtained in latent tuberculosis, with creasote, not only more or less improvement but also complete and rapid cure. It is well known that creasote exercises a favorable action upon pulmonary tuberculosis; in general, the earlier given the more pronounced the effect. It is often prescribed in the initial stage of confirmed phthisis but neglected in the latent stage where a diagnosis can only be presumed. He has employed it in seventeen cases and although they did not present pronounced signs of pulmonary localization, symptoms were observed which pointed to a developing tuberculosis: a cough dry or with muco-purulent expectoration, dyspnœa, progressive emaciation, general weakness, night sweats, diarrhœa. Besides the diagnosis was also strengthened by the existence of hereditary antecedents and a history of preceding grippe. Influenza is,as is well known, a frequent cause of pulmonary tuberculosis. Finally, there were three patients who were infected from contact with other members of their family who were undoubtedly tuberculous.

In all these cases, creasote produced a rapid and complete recovery. He administered it, in all cases, by the rectum. Each rectal injection contained 250 grams (8 ounces) of tepid water, the yelk of one egg, and an increasing quantity of creasoted oil of sweet almonds, 1:30. He began with four drops of creasote and increased the dose up to thirty, and even forty drops, per diem. If the amount surpassed one gram (fifteen drops) it was given in two or three injections. The patients took no other remedy. From his experience he concludes as follows:

1. Pulmonary tuberculosis may be cured. This should be made known to the patients and their families in order that they may have the benefit of early treatment and understand the gravity of the affection, from the beginning.

2. Creasote is a very active agent in pulmonary tuberculosis. Its influence is especially manifest in latent tuberculosis, where it may be used to confirm the diagnosis and bring about a rapid and lasting cure.

3. It is very important to diagnose as early as possible in latent tuberculosis in order that the patient may have the advantage of early treatment.

Creasote, given by the rectum, in sufficient doses, will produce a rapid and complete cure of insidious bronchitis of grippal origin which he maintains is only a developing tuberculosis. If used with prudence, it has no inconveniences even in case of error in diagnosis.

LARGE DOSES OF OLIVE OIL IN LEAD COLIC.

Dr. Combemale (*Le Progres Mèdicale* No. 42, 1893) by a single large dose of olive oil of 200 grams, (seven ounces,) with the addition of menthol or cocaine in order that it be tolerated, has obtained favorable results, in lead colic. The oil is deobstruent and sedative which action is by no means as easily obtained with other therapeutic measures. In doses of an ounce and a half per diem, he has obtained a cessation of the nervous phenomena in chronic lead poisoning.

A NEW TREATMENT OF HYDROCELE.

Dr. J. Neumann (*Weiner Medizinische Presse* No. 45, 1893) describes a method of treating hydrocele which he has employed successfully in six cases. After careful disinfection a trocar is introduced into the tumor. While the serous fluid is flowing out it is pushed up still higher, left in the sac and a slightly compressing bandage applied. This is allowed to lie undisturbed for about two days. In all of his cases there followed adhesions of the two layers of the sac without suppuration or inflammation. The time of treatment lasted from seven to nine days. After removal of the canula the after treatment consisted only of cooling applications as of lead water to the scrotal skin which will still be reddened and somewhat swollen. The advantages of this method are its simplicity the shorter duration of treatment, less pain and assurance against subsequent inflammation. He explains its action by the alteration in in the efflux of the fluid, and the pressure of the canula which easily gives rise to an emigration of leucocytes which, decomposing, give rise to a fibrinogenous ferment which induces coagulation in the serum consequently produced. The slight compression of the bandage and the draining away of the surplus serum lead to adhesion of the layers of the serous membrane so that adhesion without inflammation occurs. Strict asepsis is necessary.

POMEGRANATE BARK IN DYSENTERY.

Dr. Graeser (*Deutsche Medicinische Wochenschrift* No. 90, 1893) speaks highly of the value of pomegranate root bark, in dysentery. His patients were chiefly the troops of the Dutch Colonial Army. He employed it in a macerated infusion of this and simaruba bark in wine, every two hours a teaspoonful of the maceration. This preparation is made by macerating 10–15 grams (two to four ounces) of the pomegranate root and simaruba bark in a bottle, 750 gms., of French red wine for 24 hours. As food, rice with boiled chicken, raw ham, barley soup, eggs, and potato porridge were administered. For the torturing and intolerable thirst he gave small pieces of ice with, here and there, a few drops of brandy. In all he employed this treatment in thirty cases of pronounced dysentery which were partly acute and partly chronic. They all improved or recovered completely. Only one old soldier who, at the same time, suffered from malarial cachexia, died with acute peritonitis. The necropsy revealed that it was due to rupture of an abscess of the liver into the peritoneal cavity and not to the dysentery. The results of this treatment are very rapid. Patients in a completely decrepid condition, with cool and clammy skin, small and rapid pulse, somnolent and apathic, when they entered the hospital with tenesmus, cramps in the calves of the legs and colicy pains as in cholera, were strikingly improved in four to five days. The torturous thirst and colicy pains with the sphincteric paralysis disappeared, the stools, which sometimes were as frequent as sixty in a day, bloody or sanguino-purulent and passed drop by drop, became feculent and soft. If the treatment were discontinued at this stage there would be quite certain to be a relapse, which would again yield to the remedy. It must be continued until the last traces of the disease have disappeared. If there be great tenesmus or excoriations, opium or cocaine in suppositories may be employed. If these fail then use disinfecting rectal injections. A fresh preparation of the drug is of great importance.

ACUTE BRONCHITIS.

In (*La Semaine Medicale* No. 64, 1893) the following is recommended in acute bronchitis :

℞ Salol ....
Terpene Hydrate, ana...25 cgms. (grs. iv)
Codene..................1 cgm. (1-5 gr.)

Sufficient for one powder. Make twelve such powders. One every two to four hours.

ACNE.

Professor Schwimmer (*La Semaine Medicale* No. 64, 1893), praises the following formula :

℞ Sublimed Sulpher........
Starch, ...ana..... 5 gms. (ʒj ¼).
Black Soap.............. 10 gms. (ʒijss).
Lard..................... 30 gms. (℥j).

Apply in a fine film, leave in place two hours. Then remove and wash the face in warm water and dust with rice or starch powder. After eight to fifteen days prescribe a simple ichthyol ointment.

ABSTRACTS.

LOSS OF HAIR.

Dr. G. T. Jackson, in writing on this subject, says that he has chosen the term "loss of hair," rather than baldness, because in my tables I have placed a number of cases in which absolute baldness was not present, but a general thinning of the hair, which, if not checked, would lead to baldness. Cases of defluvium capillorum coming on after acute illness are also included.

Of the 100 cases, 65 occurred in men, and 35 in women.

Of these, the nationality was: Canada, 1; Ireland, 1; Germany, 3; United States, 95.

Condition:

Married: 12 men ; 16 women.
Single: 45 men ; 16 women.
Widowed : 3 women.
Not recorded: 8.

Occupation;—of the men:

Architect	1	Librarian	1
Bookbinder	1	Lithographer	1
Broker	5	Lawyer	5
Clergymen	2	Manufacturer	2
Clerk	8	Mechanic	2
Dentist	1	Merchant	2
Electrician	1	Physician	15
Farmer	2	Presser	1
Grocer	1	Waiter	1
Lecturer	1	None	5

Of the women:

Housewives	16	Glover	1
Singer	1	None	16

Age at beginning:

From 10 to 20 years: 7 men and 7 women.
From 20 to 30 years: 44 men and 11 women.
From 30 to 40 years: 15 men and 11 women.
From 40 to 50 years: 1 man and 3 women.
Over 50 years: 2 women,

The greatest number of cases began in the 25th and 26th years, viz: 9 in each year. The next most frequent age was 22, with 8.

The baldness, or loss of hair, took the form of a

general thinning	in	6	mem	and	19	women.
It affected the crown and temples	"	13	"			
It affected the crown alone	"	32	"	"	10	"
It affected the temples	"	4	"	"	2	"
It affected the temples and tonsure	"	5	"	"	2	"
It affected the tonsure.	"	4	"	"	2	"
" " " occiput.	"				1	"
" " " pariental region	"	1	"	"	1	"

The following diseases were noted as complicating the loss of hair:

Anæmia	4 cases	Menopause	1 cases
Chorea	1 "	Metrorrhagia	1 "
Constipation	1 "	Over-training	1 "
Dyspepsia	11 "	Parturition	3 "
Dyspepsia and Constipation	5 "	Peritonitis	1 "
Endometritis Chronica	1 "	Pneumonia	2 "
Gonorrhœa	1 "	Spermatorrhœa	1 "
Gout	1 "	Sunstroke	1 "
Headaches	4 "	Urethritis Chronica	1 "
Influenza	1 "	Uterine fibroids	1 "
Malaria	7 "	Chancroid	1 "
Measles	1 "		

The cases of loss of hair following influenza, measles, parturition, pneumonia, peritonitis, and sunstroke were what are called defluvium capillorum, and came on from 1 to 5 months after convalescence.

The scalp and hair were found to be diseased in 88 per cent. of the cases as follows:

Atrophied and bound down	2 cases
Canities	4 "
Eczema capitis 8 years before hair-fall	1 "
Seborrhoea congestiva	2 "
Sweating head	5 "
Pityriasis	10 "
Seborrhœa oleosa	3 "
Seborrhœa sicca	55 "
Fragilitas carinium	3 "

In 46 per cent. of the cases there was a history of baldness in the family, as follows:

	MEN.	WOMEN.
Father only	7 cases	
Father and paternal uncle	2 “	
Father and paternal cousins	1 “	
Father, paternal grandfather, and brothers	1 “	
Father and brothers	4 “	
Father, brother, and maternal aunt		1 case
Father and maternal uncles		1 “
Father, mother, and brother	2 “	3 “
Paternal uncle and brothers	1 “	
Paternal uncle	3 “	
Paternal uncle, maternal grandfather and uncles	1 “	
Mother	3 “	2 “
Mother and maternal grandfather	1 “	1 “
Mother and sisters		1 “
Mother and brothers		1 “
Maternal grandfather	1 “	
Maternal uncles	1 “	
Maternal uncles and brother	1 “	
Brothers	2 “	
In family on both sides	4 “	1 “

As possible contributory factors it was noted that:

1 patient constantly wore a close-fitting cap.
2 patients became worse after a short residence at the seashore.
2 patients smoked to excess.
21 patients soused their heads daily in cold water.

What deductions can we draw from the preceding figures?

1. As to the sex,—we find that 65 per cent. of the cases occurred in men. This is in accord with the well-known fact that men are more frequently bald than women. Therefore masculinity is a predisposing cause of loss of hair.

2. As to nationality,—no deduction can be drawn, as a preponderance of Americans was to be expected.

3. As to condition,—although we find 61 per cent. of the patients were unmarried, and but 28 per cent. were married, this does not allow us to draw any inference, because experience teaches that most men do not mind becoming bald half as much after they are married, as before they marry. Men tell me again and again, that they would not mind growing bald if they were married. It is a common experience that men are not so particular about their personal apperance after marriage as before, as they have other and more important things to think of. It is also to be observed that our tables show that the number of married and unmarried women is the same. With women the case is different from what it is in men, as the condition of the hair is for women a most important consideration from the standpoint of personal appearance, a fine head of hair being to them a matter of pride.

4. As to occupation,—here too, I should hesitate to draw an inference. If we took the figures alone, we would be compelled to think that doctors were especially liable to become bald. It is certainly suggestive that 26 per cent. of the cases occurred in professional men, this is in architects, clegymen, dentists, lecturers, librarians, lawyers, and physicians. If we add to these the 5 brokers, who certainly live under a constant nervous strain, we have 31 per cent. of the cases occurring in brain-workers. This is not intended to throw any slur upon the rest of the occupations mentioned in the tables. It, however, tends to suggest that active brain-work does predispose to loss of hair.

5. As to age,—it is evident from my tables that the majority of the cases of loss of hair begin before the thirtieth year of life, namely 69 per cent. We also see that in 67 per cent. of the men, and 31 per cent. of the women, loss of hair began between the 20th and 30th year. There is also a very marked difference between the sexes in the next decade; 18¾ per cent. in men, and 31 per cent in women. We also learn that the most critical years are from the 22nd to the 26th. Though the present paper is not intended to touch upon treatment, I would say that it is between the ages of 20 and 35 that we are most justified to expect good results from it.

6. As to the location of the loss of hair,—we find that 42 per cent. of the cases affected the crown alone, and 13 per cent. affected both the crown and temples. In 25 per cent. of the cases, there was a general thinning of the hair, and this was three times more frequent in women than in men. The tonsure alone was seen only 6 times, but it occurred with the receding temple 11 times. These figures bear out the well-observed fact that the top of the head is the location of baldness.

7. As to complicating diseases,—in only 52 per cent. of the cases did this factor enter into the field of our study. Of these anæmia, or diseases inducing anæmia, constituted nearly 79 per cent., namely: Anæmia, chorea, constipation, dyspepsia, endometritis, gout, headaches, malaria, metrorrhagia, over-training, spermatorrhœa, menopause, chronic urethritis and uterine fibroids. Acute and general constitutional diseases were met with in 9 per cent. of all the cases. Sexual disorders were met with only 4 times. A fair deduction from the figures is that anæmia is

a cause, or at least a predisposer, to loss of hair; and that the popular idea that loss of hair is due to sexual excesses is wrong.

8. As to diseases of the scalp and hair other than its fall. The scalp was diseased in 82 per cent. of the cases. Seborrhœa or pityriasis was present in 70 per cent. of the cases, and sweating or heat of the head was seen in 9 per cent. A history of an antecedent disease of the scalp was seen in but 1 case. From this the deductions are that seborrhœa is a most active cause of loss of hair that sweating of heat is a far more important symptom of danger to the hair than writers on baldness have commented on; and that an antecedent disease of the scalp other than seborrhœa is by no means so common as Pincus would have us believe.

9. As to heredity,—in 46 per cent. of the cases, there was a history of baldness in the family. It is certainly a most surprising fact, brought out by my tables, that in all the cases of loss of hair in women, there is a distinct history of the affection occurring on the maternal side; while in the 35 cases in which there is no history of maternal heredity, the men only are affected. It will be interesting to note, if further statistical studies show the same results. From the tables now presented, it is fair to deduce that loss of hair is markedly hereditary, and that it tends to descend in the same sex.

10. As to contributing factors,—in 21 per cent. of the cases, we find a history of daily sousing the head in water. This is by no means as great a percentage as is given by some other observers, but still great enough to suggest that the habit is detrimental to the hair. The other factors noted are so few as to be useless for deductions. They would tend to show, however, that the popular idea that wearing close-fitting headgear is a frequent cause of loss of hair is not true.

Summary: from the foregoing study of loss of hair, we can summarize as follows:

1. Men are far more prone to baldness than women, the proportion being as 65 to 35.

2. Neither the married nor the unmarried state exercise any influence in the production of baldness.

2. It is probable that active brain-work and nervous mental strain predispose to baldness.

4. The majority of cases of baldness occurring before middle life do so between the 20th and 30th year; and this is more marked in men than in women.

5. Anæmia, or disease that predispose thereto, are active causes of baldness.

6. Seborrhœa in all its forms is an active cause of baldness.

7. Sweating and heat of head may be regarded as danger signals,—foreshadowing loss of hair.

8. Heredity is a pronounced predisposing factor in baldness, and it shows a tendency to descend in the same sex.

9. The daily sousing of the head is pernicious to the preservation of the hair.

The study of ætiology is helpful chiefly as it teachers us how better to treat diseases. From the analysis of the causes of loss of hair, as here given, we may, I think, learn that it is essential for us to put our patients who are losing their hair, in the best possible physical condition; to cure, or at least alleviate, any disease of the scalp that may be present; and to forbid their sousing the head in water. —*Amer. Med. Surg. Bul.*

INDICATIONS, TECHNIQUE AND RESULTS OF OPERATION ON THE APPENDAGES.

Schauta presented a paper on this subject before the German Gynecological Association at Breslau in May, 1893, of which the following is a synopsis:

1. The frequency of inflammatory diseases of the appendages is, according to Schauta's own material, 17.8 per cent.

2. A permanent return to normal conditions is not to be expected when the tube as a result of inflammatory changes has become as thick as a finger.

3. The diagnosis of the contents of the enlarged tubes (whether sterile, or containing gonococci, streptococci or

staphylococci) cannot be made with accuracy either from the history, the examination, or the course of the temperature.

4. Fever temperatures may be found before the operation, in cases of sterile contents, and completely normal temperatures where the tubes contain pus with streptococci or staphylococci.

5. The indications for operative treatment are present when the tube is the size of the finger and severe symptoms are present; in every case, however, where pus is present in the tube.

6. In case of pus during the operation, the immediate bacteriological examination of the pus is of great importance.

7. Where the tumors are of moderate size, and no pus is seen during the operation, it should be performed in the Trendelenburg position, and after complete separation of all the adhesions of the tubes with the surrounding parts, and thoroughly unfolding of the broad ligaments, continuous ligatures should be placed through the broad ligament and the isthmus of the tube, and then the tube should be cut away.

8. In the case of large tumors lying close to the abdominal wall the procedure is as follows: The peritoneum is opened, and if the opposite side is diseased to a less degree, the appendage of that side is removed; the large tumor is brought up against the abdominal opening and attached to the parietal peritoneum around a small circumference; the rest of the abdominal wound is closed. Then the pus tube is punctured with a fine trocar, a portion of its contents aspirated, and immediately subjected to a bacteriological examination. If the pus proves to be sterile the sac is immediately opened to the extent of the exposed surface, washed out, the peritoneal sutures separated and the sac removed in the usual way. Should the pus prove to contain strepto- or staphylococci, the operation is temporarily suspended, and only after four or five days when the peritoneal cavity is completely shut off is the incision and drainage of the tube carried out.

9. In case of large pus sacs lying close to the vaginal vault, the opening from the vagina is indicated. Still in general the abdominal method is to be preferred since in the vaginal method one is denied the possibility of seeing the condition of the other side, or of operating on it, unless the method of total extirpation of the uterus according to Péan is followed.

10. In cases of medium sized tubes (size of an egg to that of an orange) laparotomy with careful avoidance of opening the sac is to be carried out. Should the sac burst, the pus should be immediately examined. If sterile, or containing gonococci the abdominal wound may be closed as usual; if containing strepto- or stapylococci Douglas's pouch which has been in contact with the pus should be drained after the method of Mikulicz.

11. The draining of Douglas's cul-de-sac is effectual first by drawing off the secretions, but principally by the speedy formation of adhesions which separate the part to be drained from the rest of the peritoneal cavity.

12. The mortality of Schauta's 216 cases from February, 1887, to April, 1893, was 13 or 6 per cent. Two of these, however, died of pneumonia.

13. The mortality of the cases of operations on the tubes where no pus or only sterile pus was found was 2.9 per cent. (four out of one hundred and forty-four); the mortality where gonococci were found in the pus was 9 per cent. (three out of thirty-three); the mortality where strepto- or staphylococci were found was 20 per cent. (three out of fifteen). Of the cases of the last category, with escape of pus, of six drained, one died, of five not drained, two died; of cases of laparotomy without escape of pus, and a second operation later, and of vaginal opening (four cases) none died.

14. For the estimation of the final results, Schauta has reports of 121 cases. One hundred were free from any disturbance, in 17 cases there was marked improvement, in four cases the old troubles persisted. The percentage of cures therefore was 82.6 per cent.—*Bost. Med. and Surg. Jour.*

TURPENTINE emulsions are used a great deal in typhoid and in low forms of fever with good results. But in some cases there is an idiosyncrasy to its use and stranguery of the kidneys may be brought on.

OVER-CROWDED POPULATION AND THE PUBLIC HEALTH.

At a recent medical meeting some of our most distinguished physicians discussed the question of the dangers to the public health of New York from over-crowded population. The unanimous verdict reached was that over-crowding as it exists in our tenements is dangerous. This, to be sure, is something that almost every one had all along supposed to be self-evident; nevertheless, it is gratifying to have our axiomatic beliefs weighed and not found wanting. If no one debated except when some novel point was at issue, the silence would be most depressing. If the old idea appears in a new and moderately pleasing garb of words, we need ask nothing more—or will usually receive nothing more if we do ask it. In the present instance at least one of the speakers fulfilled this condition. He contrasted the death rate for a decade of the tenement-crowded metropolis with that of the neighboring city with its isolated dwellings. Considering chiefly such diseases as are directly contagious and those known to be markedly influenced by unhygienic surroundings, he found that in the case of scarlet fever, diphtheria, consumption, pneumonia, and intestinal disorders the death rate of New York relative to the population has been uniformly much higher than that of the other city, the difference in some cases being really startling. In case of only one disease—typhoid fever—has New York the advantage. This is explained by the fact that typhoid is a disease not directly transmissible from person to person, and one that never originates *de novo*, no matter how unhygienic the surroundings. Its germs must enter the body by way of the mouth, and the source of contagion is almost always the drinking water. New York, it would appear, has a better water supply than Philadelphia. Croton is not perfect, but it is better than Schuylkill.

Water aside, the doctors seemed agreed that we have not much in a hygienic way on which to plume ourselves; at least, not in our tenement districts. But then, as we have hinted, we knew or thought we knew all this before. The really significant question, and the one for whose answer we are anxiously waiting, is one made historic in quite another connection by a former owner of New York: What are you going to do about it? But at this inopportune moment came the silence. One physician did indeed hint that by the "refined methods of infanticide" in vogue—namely, the custom of leaving babies to the tender mercies of unsympathetic nurses, to be slowly poisoned with city milk, prepared foods, and other indigestibles—much was being done to reduce the rate of increase of our native population, and so indirectly the over-crowding. But he intimated that his Fifth Avenue patients were the ones most given to this practice, and spoke incidentally of families of fourteen or fifteen children in the tenements, from which one must infer that the reduction from this source is altogether out of focus, so to speak, and hence not to be depended upon.

Reference was made also to Mr. Greeley's well-worn advice to the young man. Considered merely as advice in the abstract, this is excellent. But in practice not only does the metropolitan-born young man decline to go West, but the young man whom nature, in anticipation of this advice, has caused to be born in the West, often fails to appreciate this prenatal kindness, and promptly annuls his advantage by migrating to New York, thus adding to the over-crowding.

Accepting the over-crowding as a fact to be reckoned with rather than overcome, another speaker hinted at building laws which should insure more air by allowing the construction of no tenement building more than two-thirds as wide as the building lot, after the Berlin method. But imagine a New York builder submitting to such a law as that! Before this worthy could be evolved to such a stage as that, our mechanical friends will have perfected their air-ships.

So after the discussion was over, here we were left in our crowded city, amidst dirt and carbon dioxide and micrococci and six-days-old milk, to struggle along as best we might, just as we had been doing all along, with little to console us except that relatively limpid Croton supply. However, even that is something to be thankful for, though it is to be feared that the tenement-dweller is too far removed from the prohibition atmosphere of Maine and Iowa and Kansas and too close to the corner saloon fully to appreciate blessings of this nature.—*Harper's Weekly.*

OPERATIVE HERNIA AT THE FRENCH SURGICAL CONGRESS.

Except for a few contra-indications,—such as age, general condition, and volume of the hernial protrusion,—there is now almost no case where a cure may not be obtained by means of the operative methods. After hundreds of observations, it is pretty definitely settled that in most cases, at least, the surgical management of hernia results in a radical cure. Of course, however, there are instances of recurrence, particularly in two classes of cases,—those depending on the nature and variety of the hernia, and those depending upon the operator.

There are still some surgeons, anxious to extirpate the sac quickly, who spoil the operation by bungling methods. The superficial tissues are cut through quickly, the sac laid open in a hurry, dissected free and excised carelessly, and some sutures made rapidly. Such an operation cannot give desirable results.

Great care is necessary to dissect up the sac very high,—well into the abdominal cavity, and to reconstruct the canal and the columns of the rings.

This operation, to be successful, must be methodical, is always delicate, and often long, and not a single detail can be neglected. Some surgeons may have more recurrences than others. Some herniæ no matter how skilful the surgeon, particularly the very voluminous herniæ, passing through large rings, with lax and non-resisting muscular walls, are very apt to recur. These cases require the most particular attention from the surgeon.

Zaucarol (Alexandria) considers that the danger of a radical cure is much less than when the hernia is not subjected to operative methods. In 30 cases he has only one slight recurrence. His first operation was performed seven years ago, and the last four months ago. Ten of his cases were operated upon according to Lucas Championierre's method, and the one recurrence was among these cases. Eight were treated by an English modification of this method, which consists, after opening the sac, in detaching the neck as high up as possible, and suturing and replacing it in the cavity. Two thick silk threads, in the shape of an X, are passed through the inguinal canal. Three or four deep threads are then applied perpendicularly to the incision. These are tied, the skin is then sutured and the two deep-crossed threads are tied.

Thiriar (Brussels) described a new method in which the sac having been resected and the stump returned to the belly, he employed a plate of decalcified bone between the stump and the abdominal wall. The size of this plate varies according to the size of the opening. It is fixed in position by catgut sutures.

In 20 patients with voluminous herniæ, Thiriar ascertained that this bony plate was absorbed and replaced by hard and resistent scar-tissue, which has never yielded, so that not one recurrence has taken place.

Schwartz did not resort to bone-transplantation, but to a kind of myoplastic operation. This consisted in the following:

In cases of large openings and very thick hernias, it is absolutely necessary to consolidate the hernial region. Skin, tampons, catgut, calcined and decalcined bones, etc., have been employed for this purpose.

He had, some time ago, to operate for an enormous femoral hernia, the most voluminous he had ever seen. It occupied the entire half of the thigh and issued through a ring which permitted the easy passage of two fingers.

To close this large opening he dissected a flap from the long adductor of the thigh, turned it down over the open ring, and sutured its entire circumference with silk.

The empty cavity was covered, as much as possible, with cellular, fatty, and fibrous tissue. The operation was performed four months ago, and the patient, though not having worn the truss which had been prescribed, had, at the level of the ring, a supple and resisting wall.

In inguinal hernia, having split the canal or ring, the sheath of the great tight rectus muscle is opened along its external margin and a large flap, with a long pedicle, is detached from it and pushed outside so that it passes behind the interior column of the ring. It is sutured to the canal and orifice, the cord being passed below its inferior border; the columns are reunited with silk and the muscle inserted beneath. The sheath of the rectus is closed again, the operation being completed in the usual way.—*Gaz. des. Hopitaux.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE ANNALS OF GYNECOLOGY AND PÆDIATRY

for November. Dr. M. S. Marcy contributes an excellent paper on

Abortion,

considering only the criminal and artificial sides of the subject. He condemns in unmeasured terms the production of abortion for any other reason than the saving of the life of the mother. No matter what the station in life of the unfortunate woman, the author believes that it is the duty of the physician, when he has the proof against the abortionist, to report such cases to the legal authorities.

In regard to artificial or necessary abortion, the cause which most often forces the physician to the operation is the pernicious vomiting of pregnancy. The author asserts that the diagnosis is not so simple as at first seems apparent. Gastric ulcer, chronic gastritis, cancer of the stomach or liver should be carefully eliminated. The hygienic part of the treatment is very important in the milder cases and is not to be overlooked in the graver ones. The author advises that the patient take a light meal of any food that can be retained, an hour or two before arising from bed. The caprices and fancies of the patient should be respected. When all food taken into the stomach is rejected, nutrient enema must be tried. Early attention should be given to the gynecological treatment of the case. If uterine displacement exists, gentle efforts should be made to reduce the organ to its natural position, not forgetting however that the normal position of the pregnant uterus is one of anteversion or even mobile anteflexion. By far the most efficient procedure, the author believes, is the treatment of the vaginal portion by means of the application of a 10 per cent. solution of nitrate of silver through a cylindrical speculum. After exhausting the hygienic, medical and gynecological treatment the attendant should terminate the pregnancy by artificial means. The author takes the position that it is not only the physician's duty, but that he is criminally negligent if he allows his patient to die from pernicious vomiting of pregnancy without evacuating the uterine contents. The operation to be successful, should be performed early without waiting for the patient to become exhausted.

Dr. William H. Humiston contributes a paper on

Treatment of Diseases of the Uterine Appendages.

For the vaginitis, active endometritis and tender appendages the result of gonorrhœal infection, and which would develope into pyosalpinx, the author advocates the following treatment: "The patient should be put be to bed and made to stay there. A one to three thousand bichloride douche following the hot-water douche, of half an hour's duration, twice a day, after which the vagina is well dried, and thoroughly dusted with powdered boracic acid and aristol, equal parts, and the vaginal walls kept apart by antiseptic non-absorbent tampons. This treatment faithfully observed for one week will so remove the more acute symptoms that curettement can be made." After curetting thoroughly, the author applies the compound tincture of iodine freely to the uterine cavity. The patient should remain in bed for ten days after the curetting; she should be treated locally until every trace of the disease has been removed. When the case has advanced to the formation of pus, laparotomy and the removal of the pus collection is the only rational treatment.

In regard to the use of electricity, the author states thae he values it highly, and in the catarrhal forms of endometritis in young girls and primiparæ a cure can be obtained if sufficent time be given. The author also regards electricity as a valuable aid in the diagnosis of doubtful suppuration. The positive intra-uterine electrode is introduced to the depth of one inch in the uterine cavity and a current of forty to fifty milliamperes gradually applied. If the patient is oversensitive to the current, and complains of great pain, which persists for several hours after its application, you have a case of suppuration. If inflammation or congestion is present there will be a sense of relief, which will continue for a day or two after the application.

The Results of Vaginal Hysterectomy

is the title of a paper contributed by Dr. Andrew J. McCosh. The author considers the results of his own operations for cancer and for prolapse. He has performed the operation for cancer sixteen times with no deaths. In regard to the technique of the operation, he prefers the use of silk ligatures to the clamps for securing the broad ligaments, and he states that he has seen no great disadvantage from the use of the ligatures. The technique of the operation is thoroughly discussed in the paper and the subsequent histories of the sixteen cases operated on reported. The author states that while there are a certain number of these cases suitable for abdominal hysterectomy, he has never seen one which, in his opinion, was suitable for sacral hysterectomy and he is of the opinion that when a uterus cannot be removed by the vagina or abdomen it is better to refrain from any radical operation.

In regard to vaginal hysterectomy for prolapse, the author reports six operations with but one success. It is his judgment, therefore, that vaginal hysterectomy for the cure of aggravated prolapse is an unsatisfactory procedure, and that, as a rule in such cases, abdominal hysterorrhaphy is the preferable operation.

Dr. X. O. Werder discusses the

The Present Status of the Treatment of Uterine Fibroids.

Electricity he regards as having failed to accomplish the good results claimed for it. It is useful mainly for the relief of symptoms in carefully selected cases and can in no sense be regarded as curative. Galvanic puncture he regards as fully as dangerous as hysterectomy in skilled hands and not to be compared in its results to operative measures. The author discusses the relative merits of vaginal enucleation, enucleation of the tumor by laparotomy, and suprapubic hysterectomy. The abdominal and extra-peritoneal methods of performing hysterectomy are also considered and the author decides that while his preference in good, vigorous subjects would be total abdominal hysterectomy, he would feel that the weak reduced patient had a better chance for life with extra-peritoneal treatment of the stump.

Dr. Andrew F. Currier contributes a short paper on

Myoma Uteri and its Treatment.

The best that electricity has accomplished, he says, is the symptomatic cure, which does not remove the tumor, but leaves it as a continual reminder of the possible recurrence of all the bad symptoms. Palliative treatment is for those who will not submit to a radical operation, and as a means of preparation for radical measures. Foremost among palliative measures is galvanism. It will relieve pain, will often check hemorrhage, but will seldom cause reduction in the size of the growth. Galvano-puncture is not approved of; it is too apt to expose the patient to the dangers of sepsis and peritonitis. If the tumor and uterus are to be removed, the method of complete extirpation will usually be preferable to any which leaves behind a stump or pedicle.

Dr. Frank W. Talley discusses

Exploratory Cœliotomy for Ascites Abdominalis,

reporting two cases. The author advocates an exploratory laparotomy for the relief of the trouble rather than the old method of tapping, as by the first procedure the finger introduced into the abdominal cavity is able to recognize the seat and character of the disease, which can be removed at that time or at a subsequent operation.

Dr. J. M. Baldy contributes a paper on the "Removal of the Uterus and its Appendages for Pelvic Inflammatory Disease." The author takes the ground that the uterus is the original source of the trouble and that it is a useless organ after the appendages have been removed. When it is infiltrated with pus, therefore, it should be removed along with the appendages.

The remaining papers in this month's issue are: "Hydatidiform Mole of Uterus," by Dr. Horace Fox; the "Synopsis of One Hundred Operations for Severe Structural Diseases of Abdominal and Pelvic Organs of Women," by Dr. I. S. Stone; and "Notes in Regard to Uterine Fibro Myomata," by Dr. Nicolas San Juan.

In the Department of Pædiatry, Dr. J. Madison Taylor contributes a clinical lecture on "Enlaged Tonsils; Umbilical Hernia; Blood Dyscrasia Following Erysipelas, Complicated by Extensive Nævus."

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

THERAPEUTICS.

Action of Bicarbonate of Sodium on the Digestion.

Linossier and Lemorne (*Nouveaux Remedes ; N. Y. Therap. Review*) have made experiments concerning the action of bicarbonate of soda on the digestion of a patient with regurgitations and have drawn the following general conclusions :

1. Bicarbonate of soda administered in any dose, even of ten grammes, is a stimulant of the gastric secretion.
2. One hour after digestion this stimulation of the gastric secretion produces the first saturation of the alkali.
3. If the dose administered is small, the stimulation of the secretion continues after the alkali has been neutralized, and causes a slight temporary increase of muriatic acid.
4. If the dose is medium, the stimulation lasts longer. The maximum proportion of muriatic acid in the contents of the stomach is attained more slowly, but is larger.
5. If the dose is a large one, the secretive function exhausts itself to neutralize the alkali, and the proportion of muriatic acid may be less than it is normally when the food leaves the stomach.
6. The time required for the muriatic acid to attain its maximum proportion in the chyme, is as follows for the different doses: two hours after a dose of 0.5 grams of bicarbonate of soda; three hours for a dose of 1 gram, and four hours for a dose of 5 grams.
7. Given one hour before meals, one gram acts as a small dose, five grams as a medium dose, and ten grams as a larger dose. Given just before meals, 0.50 grams is a small dose, 1 gram a medium dose, and 5 grams a large dose.
8. The doses producing the best stimulation are consequently 1 gram just before meals, or 5 grams one hour before.
9. Bicarbonate of soda, given just before meals, suspends the secretion of pepsin.
10. The saturative action of bicarbonate of soda, administered in a dose of 2 grams one hour after a meal was very slight and without

stimulation; the action lasted longer but equally without producing stimulation after a 5 grams dose, and definitely after a 10 grams dose. That is to say the normal proportion of acid had not been recovered at the end of the period of digestion.

The practical conclusion to be derived from these experiments, as far as the treatment of hypersecretion of muriatic acid (hyperchlorhydria) is concerned, is that, in order to avoid the consecutive phenomena of excitement, repeated small doses, producing only incomplete saturation should be used before large doses. A medium dose may cause only a temporary relief followed by an increase of the symptoms. The doses will usually vary, with different patients.

11. Carbonate of calcium would probably be superior to bicarbonate of soda in the treatment of hyperchlorhydria, as after its use, and with an equal quantity of acid secreted as follows the administration of bicarbonate of soda, there is no production of free acid.

12. The action of the alkalies continues after meals during which they have been administered. The stimulation of the secretion is still observable two days after the last dose has been given.

13. Abnormal fermentations are enhanced by the administration of bicarbonate of soda from the moment of its ingestion to the reappearance of normal acidity, and may continue thereafter. The only case in which abnormal fermentation seems to be stopped despite the administration of the drug, is when it is given in small doses one hour before meals.

14. From a therapeutic standpoint, bicarbonate of soda is essentially a remedy for the insufficiency of gastric secretion, and must be administered preferably some time before meals. In hyperchlorhydria it is only a palliative remedy, which is liable to aggravate the general course of the disease by exciting the mucous membrane, which in this case is already too much excited. The administration of muriatic acid might be of some service in diminishing the secretive activity of the glands. Further experiments will be made to verify this hypothesis.—*Med. Review.*

Preliminary Report on the Disinfection of Clothing, Leather Goods, Brushes, and Books with the Formaldehyd (Formalin).

Prof. Lehmann had performed a series of experiments with a 40 per cent. solution of formaldehyd, called formalin, on silk and woolen clothing, books, combs, leather goods, etc., which were infected with cultures of vibrio choleras asiaticas, staphylococcus pyogenes aureus, bacillus prodigiosus, and anthrax spores. When the articles were so arranged as to allow the fumes of formalin to come in contact with them, there was seldom a disappointing result to be recorded, and that without any damage whatever to the fabric acted upon. The most satisfactory method employed was to place the articles to be disinfected in a box, together with a cloth or absorbent paper moistened with formalin, in alternate layers; the box was then closed and left undisturbed for 24 hours. There is an unpleasant and irritating vapor arising from the formalin; the irritation can, in time, be tolerated; the odor, however, is readily set aside by spraying aq. ammonia upon the article disinfected with formalin.

The author suggests the use of two chests for use in the household for disinfection purposes after contagious diseases. The first for the use of formalin, and the second to expose the articles to ammonia. This can be done without injury to clothing, brush, leather goods, combs, etc. He likewise recommends its use by barbers and in circulating libraries. Formalin (40 per cent. of formaldehyd) is non-combustible, and its vapor non-explosive. Small articles, entirely enveloped, can be disinfected in from five to six hours.—*Munch. Med. Wochenschr.*

Chloroform Mortality in Australia.

In the *Australian Medical Gazette* for August is a short paper dealing with the mortality from chloroform in Melbourne and suburbs during the past five years. In 1888 there were 2 deaths; in 1889, 6; in 1890, 1; in 1891, 4; in 1892, 3; or a total of 16, that is to say, an average of over 3 per annum. The author points out that the death-rate from chloroform is about three per annum in an average population of 450,000. Thus, chloroform on this calculation is proved to be rather more dangerous to life than snakes, inasmuch as the death-rate from snake-bites for the whole colony and chloroform for Melbourne are about the same. It appears to be impossible to make any estimate of the number of chloroform administrations, so that the percentage of deaths to the administrations is merely a matter of conjecture.—*Med. Press and Circular.*

MEDICINE.

Deaths from Anæsthetics in Germany.

The Collective Investigation (Anæsthetics) Committee gave the results of their work at the 22nd Surgical Congress held at Berlin in April. "Fifty-eight reports had been received during the year, comprising 57,541 cases of administration of anæsthetics, 11,564 of which were administrations of nitrous oxide in dentistry, leaving 46,077 with other anæsthetics with 12 deaths. These results, added to those of the two previous years, make the total 159,814 cases of narcosis, with 53 deaths, or one in 2,977. The chloroform cases were 138,609, with 46 deaths, or 1 in 2,839; the ether cases were 14,506, with no death; mixed chloroform and ether, 1 death in 4,118; narcosis with Billroth's mixture of ether, chloroform and alcohol, 3,450 cases, with one death; bromide of ethyl, 4,538 cases, and one death; 597 cases of narcosis with Pental resulted in 3 deaths, or 1 in 199."—*Med. Press and Circular.*

Hereditary Ataxia.

Sanger-Brown, of Chicago, minutely describes twenty-one cases of hereditary ataxia, all belonging to a single family, and comprising four generations. The author is inclined —with a certain reserve—to consider these cases as hereditary ataxia, but also recognizes the fact that they differ in some important features from the type usually presented by this disease. These important deviations, which Ormerod and Bernhard also call attention to, are the following:—

1. In true hereditary ataxia (Friedreich's form), the disease usually presents itself between the ages of 12 and 18, while in the cases quoted by Brown it frequently manifests itself much later (for example, at 45 years).
2. The majority of his patients were not of the female sex; it would appear that the disease is simply transmitted through their agency.
3. Brown frequently, though not invariably, observed ptosis, which is generally absent in Friedreich's form.
4. Amblyopia and amaurosis, which are never observed in Friedreich's disease, were constant and early symptoms in Brown's cases.
5. In the latter, the knee-jerk, which is absent in the former, was increased, foot-clonus being also present.
6. Brown did not observe club-foot nor scoliosis.
7. Pupil-reaction was deficient in Brown's patients,—a fact not to be wondered at, since in the majority of cases there was optic atrophy; a symptom which does not occur in Friedreich's disease.

As Brown did not have occasion to make a post-mortem examination in a single case, nothing positive could be determined concerning the nature of this disease. Undoubtedly, however, it closely resembles the hereditary ataxia of Friedreich.—*Brain*, No. 58.

The Pathology of Nervous Disease.

In an instructive paper on this subject Dr. Charles W. Dana concludes as follows: I would sum up the points which I have tried to bring out and emphasize in the preceding remarks somewhat as follows:

(1) The term inflammation, as now understood, has to be applied more carefully and with restrictions to nervous diseases. Many forms or cases, for example, of meningitis and myelitis are in reality toxæmias or processes secondary to mechanical injury. There cannot be an inflammation without a specific cause, and we should associate this fact with our conception and our diagnosis of the inflammatory processes.

(2) In the organic neuroses of degenerative type there is a toxine of extrinsic or intrinsic origin, which is negatively chemotactic. The body cells and proteids cannot defend the special parenchyma, against it. The degenerations, including muscular atrophies and primary sclerosis, are of toxic origin. There is a poison at work which it should be the effort of neurological science to find out how to antagonize and combat.

(3) In the chronic neuroses of functional origin, so-called, such as paralysis agitans, chorea, epilepsy, and Basedow's disease, there is a toxic factor which is of fundamental importance. This may be due to defective gland action as in Basedow's disease and in myœdema or to humoral poisons of other origin. Many neuroses are really glandular or nutritive or infection diseases.

(4) There is another element of equal importance in the etiology of the neuroses, and that is an inborn or an acquired lack of resistance to injurious agencies, whether engendered within or introduced from without. This diminished power of résistance on the part of nerve-centres is produced in some cases by strong emotions and shocks; and while under this depressing influence, the nerve-centres become susceptible to the action of the poisons which then continue and keep up the disease. In some such way as this we may explain the origin of paralysis agitans, certain forms of neurasthenia, and exophthalmic goitre, perhaps, also, even of the organic neuroses like locomotor ataxia. These views lead to the practical conclusion, that in treating many of the chronic neuroses there are two kinds of measures to be employed: first, those which increase strength and resisting powers of the organism; second, those which are of antitoxic or specific character. There are, in all probability, specific cures for many of the diseases which we now regard as hopeless; remedies which will stop the progress of locomotor ataxia and progressive muscular atrophy, and which will neutralize the poisons that keep up exophthalmic goitre, paralysis agitans, epilepsy and other neuroses.

(5) The toxic origin of nervous diseases has been established in the case of myxœdema and made probable in that of exophthalmic goitre, paralysis agitans and chorea; and the importance, at least of a toxic element has been shown for epilepsy.

(6) Finally, by the term toxine or poison is meant a very wide range of injurious substances, including the products of defective metabolism, defective gland action, microbic growth, and the extrinsic vegetable and mineral poisons.—*Boston Med. and Surg. Jour.*

Chloroform as a Tape-Worm Remedy.

Dr. Stephen (*Il Raccog. Med.*) has recently confirmed the action of chloroform as a tænicide, he having been able to expel tapeworms with this remedy which had resisted all other measures. He employs Thompson's formula:

℞ Pure Chloroform.................... gms. 4
(ʒj).
Simple syrup..................... gms. 30
(℥j).

To be taken in four doses, at seven, nine, eleven and at one in the afternoon At noon take an ounce of castor oil.

All his patients bore the chloroform well, and it was even administered to children in proper proportions.

The Antiseptic Treatment of Burns in Children.

Eight cases of burns in children, 10 months to 10 years of age, are reported by Mme. Wilbouchewitch caused by boiling fluids or flames, and ranging from the 1st to 3d degress; four of these healed without suppuration in 14 days or less. The others gave brilliant results, despite suppuration of small portions of the wounds. The frequency of burns in young children and the serious results to the usefulness of the member from contracting scars, not to speak of the danger to life from septic absorption, makes the subject one of uncommon interest. Before the days of antisepsis all burns in which the skin was detroyed suppurated under all forms of treatment. Fever, chills, and other signs of infection were common. Patients died as late as the twelfth, twentieth, forty-first, and forty-ninth day. Weeks elapsed before the healing was complete. It was first found that cauterization for counter-irritation, if made upon a surface rendered aseptic, healed under a simple dry antiseptic dressing without suppuration. Pyogenic microorganisms upon the surface of the skin will often resist heat sufficient to cause a burn of the 2d degree. Even tissues which have been charred are readily infected by clothing and subsequent manipulation. Every burn therefore should be treated as an infected wound. Thorough cleansing of the parts is the most important requisite. General anæsthesia is often necessary for this, especially in children, but burned children bear chloroform well. The dressing should be surgically complete, yet so gentle as not to further injure the damaged tissues. Burns of the 1st degree, with swelling and redness, do not become infected, but upon these later blebs may rise. Burns of 2d degree with intact epidermis are best cleansed with clean or antiseptic soap and water; first the uninjured portions, then the burned surface. Ether is often of service in fissures or about the nails, or when oily applications have previously been made. Then the parts are bathed with antiseptic solutions. Where there are unbroken blisters, healing will take place without infection even under a dirty skin, but it consumes more time than under antiseptic treatment when the skin is removed. If torn, it is always best to remove it. Soap may be used where the skin is absent. It does not cause bleeding, although this easily results from removing the skin. Cases which have suppurated but a short time may be completely disinfected. Those of six or eight days' duration will probably still produce pus but in much diminished quantities. Burns of the 3d degree with the formation of scars should be disinfected with the greatest care, especial care being used about the scars, ether employed if necessary and any which are loosened by suppuration removed with a spatula. Antisepsis thoroughly carried out, the choice between the different dressings and antiseptics is not of so much importance. Moist and fatty dressings, continuous baths, and impermeable dressings retard keratinization and should be discarded. Iodoform is often useful but may be toxic. The subnitrate of bismuth is far preferable when the injuries are not infected. Thiol and ichthyol give excellent result. Thiol dries and forms a pellicle over the surface and then is followed by a simple dressing. So treated burns frequently heal under a single dressing in eight to fifteen days without cicatrices. Even if deep, the cicatrices are but slightly visible and do not contract.—*Rev. Mens. Mal. L'enfanee.*

Rapid Death from Carbolic Acid.

A most determined suicide is reported from Dover. A servant girl, having ascertained that her mistress had gone out, went upstairs and drank, so it is said, about 60 ounces of carbolic acid, which was kept for disinfectant purposes. Almost immediately afterwards a lad in the house noticed a strong smell of the acid, and went upstairs where he found the girl dreadfully disfigured and dead in a chair. This case has two points of medico-legal interest: first, the large quanity of the poison taken, and secondly, the rapidity with which death ensued. From the evidence it is clear that the unfortunate girl suffered from suicidal mania, as she had previously made two attempts upon her life, once by jumping down a well and once by taking a poisonous lotion. —*Med. Press and Cir.*

Hydrastis in the Treatment of Night-Sweats.

Olzewski-Krakau (*Apotheker Gazette*) has employed fluid extact golden seal in doses of twenty-five to thirty drops two or three times daily, in the night-sweats of pneumonia, intermittent fever, tuberculosis, etc., with great results. Especially in phthisis were the effects admirable—but only in two patients, however, out of ninety-three, the remedy in the others unfortunately causing vomiting.—*Medical Age.*

Treatment of Some Irritable Conditions of the Stomach.

According to Hemie the cause of cardialgia is spasmodic contraction of the gastric openings, especially the cardiac. Above this there is often a dilatation of œsophagus, in which air and food are enclosed, giving rise to spasm. In dilatation of the stomach and very loose abdominal walls, it may go on without spasm to painful sensations in the cardiac end by traction of the full stomach on the œsophagus, and to collection of air from closure of the cardia after the organ is thus distended. Likewise, as a result of swallowing air and after the ingestion of certain foods, cardialgia may be produced by undue distention of the stomach. By this immoderate distention cramp at the pylorus may also arise, although with pyloric spasm the distention is usually an effect of the cramp, not the cause of it, the spasm being set up by other conditions, such as irritating contents, especially when increased irritability co-exists of the pyloric portion. For spasmodic cardialgia many remedies have been tried. Subnitrate of bismuth enjoys a great reputation. Morphine acts quickly and strikingly, but temporarily, and leads to lax gastric walls. Gastric pain is produced by irritation of ulcers and sensitive spots in the stomach as well as by spasm. Food or over-acidity of the gastric juice excites these places, and pain is the result. If these are supplied with a protective covering, much is done to relieve suffering and encourage healing at the same time. Russmend has recommended subnitrate of bismuth for this purpose. It can be taken in large doses with safety; and as it rapidly falls from watery suspension, it forms a covering for the irritable organ. The method adopted is to wash out the stomach, and pour in ten to twenty grains of bismuth in lukewarm water, and keep the patient at rest for half an hour until it settles; food may then be taken. At first the washing out may be daily; then on alternate days. Toxic symptoms do not arise. The results are excellent, as the troubles even in old and hopeless cases are relieved, and the feeling of improvement continues for several days. That bismuth actually forms a protective covering may be inferred from membranes of that substance seen when the next washing out takes place. It is probable that it is firmly deposited on ulcerated parts, and by its protective action relieves pain and lessens the motor unrest of the stomach and spasms. Over-acidity is diminished and starchy food is better borne after it.—*Berlin klin. Woch.*

Inebriety.

As a good tonic Dr. Edward C. Mann, of Brooklyn, N. Y., recommends:—

℞	Quiniæ sulph	gr. ij.
	Zinc oxide	gr. ij.
	Strychnia sulph	gr. 1-40.
	Arsenic	gr. 1-100.
	Capsicum	gr. ij.

M. et ft. pil no. j.

Sig.: One three times a day.

Together with this pill, Dr. Mann uses, for sixteen days, the following hypodermic dosimetry:—

℞	Strychnia nitrat	gr. j.
	Aquæ dest	℥ss.

M. Sig.: Eight minims daily for eight days; 4 minims daily for another eight days. To quiet the morning nausea of alcoholics, 2 or 3 drops of wine of ipecac on the tongue, fasting.

To induce sleep the following sedative is administered at night for a few days:—

℞	Tinct. opii deod.,	
	Ext. hyosc. fld.,	
	Chloral hydrat.,	
	Pot. bromid	āā ʒij.
	Tinct. capsici	ʒss.
	Tinct. aconit. rad	mv.
	Aquæ menth. pip	ad ℥iv.

M. Sig.: Two tablespoonfuls at bed-time for a few days only, freely diluted with water.

If the patient is very much excited, and is bordering on delirium tremens, the following is useful for two or three nights:—

℞	Hyoscin. hydrobromat	gr. j.
	Aquæ dest	ʒix.
	Spt. vini rect	ʒj.

M. et ft. hypodermic solution.

Sig.: Dose from 5 to 10 minims *pro re nata*.

—*Vir. Med. Monthly.*

Ringworm of the Scalp.

Dr. Leslie Roberts lays down the following rules for observation in the treatment of ringworm of the scalp.

1. Whenever practical, shave the entire scalp. This in itself constitutes rather a treatment than a preparation for it. Every hair in the head is a means of retaining moisture and heat, which favors the development of ringworm as a poultice would a boil.
2. Disinfect the whole surface of the scalp. It is not necessary to only treat the ringworm patch, the whole surface must be thoroughly disinfected. For this he recommends spraying the scalp morning and night with rectified spirits containing a few grains of salicylic acid and a little glycerine.
3. Stimulate the follicles containing the diseased hairs. At this point in the treatment the mechanical barrier to the penetration of remedies existed in the horny layer of epidermis. He was not convinced that any remedy penetrated far into the depths of the follicles. A very mild antiseptic would kill the germs so far as it reached them, but it was doubtful if they reached far enough.
4. Selection of remedies. The choice of a remedy should not be confined to the germicides, but such agent should be selected as had influence on cell life; iodine, carbolic acid, ammonia, ether, chloroform, acetic acid, cantharides and capsicum were all of use.—*Brit. Med. Jour.*

Acquired Syphilis in Childhood.

Dr. Fournier states that many physicians have the mistaken idea that syphilis in the child is almost always hereditary and very seldom acquired. Two points must be understood: (1) Syphilis is never acquired during childbirth, because at birth, the child is already syphilitic. (2) An acquired syphilis is never dependent upon syphilis of the mother, which she acquired before the child's birth, for here, again, the child is born syphilitic, although it may be latent. The positive causes of contagion are thus reduced to:

1. Nursing, by which a previously syphilitic nurse infects when she develops patches in her mouth, or papules upon the nipple, or by a nurse who is herself infected by nursing a second and syphilitic child.
2. During its growth; by its mother, subsequently affected; by its father, by its attendant, especially by kissing; by other persons with whom it comes in contact.
3. Criminal attempts.
4. Inoculation by physicians, or midwives, either by the hands or by instruments.

Fournier concludes that children acquire syphilis more often than is supposed.—*Rev. Gen. Clin. Therap.*

GYNECOLOGY.

Hysterectomy for Cancer of the Cervix by Combined Abdominal and Vaginal Dissection.

Dr. M. H. Richardson in a paper on this subject offered the following conclusions.

The advantages of the vaginal method are:

1. Less liability to peritoneal contamination.
2. More intelligent and thorough dissection of the local disease.

Its chief object is the difficulty in controlling hemorrhage.

The advantages of the abdominal method lie:

1. In a conclusive investigation of the disease itself—its local extent and its possible remote metastases.
2. In the rapidity and safety by which the broad ligaments may be tied and cut.
3. In the ease with which the ureters may be isolated and kept one side.
4. In control of hemorrhage.

Its chief disadvantage is the impossibility of thorough dissection and removal of the cervical portion of the disease.

The superiority of the combined method is seen:

1. In the intelligent and thorough dissection both of the local disease and the broad ligaments.
2. In the certainty by which hemorrhage may be prevented.
3. In the protecting of the ureters.
4. In the saving of time.

The combined method is applicable more especially to cases where the disease involves the cervix and a portion of the vaginal mucous membrane, and to cases in which the uterine body is large and fixed. It should also be employed where for any reason it may be difficult to separate the vaginal attachments.—*Bost. Med. and Surg. Jour.*

Treatment of Ovaritis.

M. Winternitz has just published his method of treating women who suffer from ovaritis. Rest in bed is the first thing insisted upon, and, as these patients are generally constipated, he prescribes a teaspoonful of the following mixture at bed-time in a glass of water:

℞	Sulphate of soda	℥jv.
	Sulphur	℥j
	Sugar	ʒv.
	Essence of peppermint, q. s.	

The abdomen is rubbed with the ointment here mentioned:

℞	Ichthyol, Lanoline,	aa

To this external treatment is added vaginal injections of warm salt water and twice daily the os is scarified.—*Med. Press and Circular.*

Two Cases of Labial Chancre in Cigar-Makers.

Dr. W. S. Gottheil reports the cases of two young women, cigar-makers, each having an initial lesion on the upper lip. One thought she had acquired the disease from the other. Both of these patients finished the tips of their cigars with saliva, and this practice was universal in the factory where they worked. Under such conditions the danger of infection from cigars would seem considerable.—*Med. News.*

OBSTETRICS.

Craniectomy.

At the Paris Academy of Medicine Dr. Bourneville read a paper upon the above subject, which may be resumed as follows:

The examination of 350 crania collected in the Bicetre Hospital, proves that, in idiotic and backward children, premature synostosis of the sutures does not generally exists.

Inasmuch as the exact state of the sutures and the thickness of the cranium cannot be determined with any great degree of accuracy in the living, it must follow that craniectomy must be done without exact data, and frequently upon crania which are perfectly able to give the brain all the space it needs.

The examination of these crania shows, also, that craniectomy is not able to give the brain any very great degree of expansion. These facts justify the statement of anthropologists who assert "that the brain makes the cranium, and moulds it upon itself." Besides this, the encephalic lesions, to which are due the greater number of the forms of idiocy; are deep, varied, and extensive, hence not susceptible of being monified by craniectomy.

Most of the surgeons who have practiced this operation agree upon the fact that in most instances their operative measures have been followed by slight or doubtful results, or by no improvement whatever; that serious accidents (paralysis, convulsions, etc.) and even death (13 times in 85 operations collected by the author) have resulted from it.—*Semaine Medicale.*

ARMY AND NAVY.

U. S. ARMY, FROM NOVEMBER 12, 1893, TO NOVEMBER 18, 1893.

Leave of absence for one month on Surgeons certificate of disability, with permission to go beyond the limits of the department, is granted First Lieutenant Madison M. Brewer, Assistant Surgeon, U. S. A.

The leave of absence granted Major Curtis E. Munn, Surgeon, U. S. A. is extended two months.

The leave of absence granted Captain Henry P. Birmingham, Assistant Surgeon, U. S. Army, is further extended one month.

Leave of absence for one mouth, is granted First Lieut. Charles E. B. Flagg, Assistant Surgeon, with permission to apply for an extension of twenty days.

Lieut. Colonel Charles R. Greenleaf, deputy surgeon general, is relieved from duty in the office of the Army, and will repair to San Francisco, California, and assumes charge of the medical supply depot in that city, relieving Lieutenant Colonel Joseph P. Wright, deputy surgeon general, who upon being thus relieved, will repair to St. Louis, Missour, and assume charge of the medical supply depot in that city.

U. S. MARINE HOSPITAL SERVICE FOR THE FOUR WEEKS ENDING NOVEMBER 18, 1893.

Purviance George, Surgeon. To report at Bureau for temporary duty, November 7, 1893. To inspect Reedy Island Quarantinne, November 14, 1893.

Carter, H. R. Surgeon. To proceed to Jessup, Ga., for temporary duty, November 10, 1893.

Banks, C. E., P. A. Surgeon. To rejoin station, Portland, Maine, November 3, 1893.

Brooks, S. D., P. A. Surgeon. To inspect service at Ashtabula, Ohio, and then to rejoin station, Cleveland, Ohio, November 13, 1893.

McIntosh, W. P., P. A. Surgeon. Granted leave of absence for twenty-three days, November 17, 1893.

Magruder, G. M., P. A. Surgeon. Granted leave of absence for thirty days, November 1, 1893. To proceed to New Orleans for duty, November 15, 1893.

Goodwin, H. T., P. A. Surgeon. Leave of absence extended 30 days, October 24, 1893.

Cobb, J. G., P. A. Surgeon. Leave of absence extended 20 days, November 14, 1893.

Guiteras G. M., P. A. Surgeon. Granted leave of absence for 30 days, November 14, 1893.

Perry, J. C., P. A. Surgeon. To rejoin station Vineyard Haven, Mass., November 3, 1893.

Stewart, W. J. S., Asstistant Surgeon. To proceed to Reedy Island and Delaware Breakwater, Quarantine Station for temporary duty.

Strayer, Edgar, Asst. Surgeon. To rejoin station, Boston, Mass. November 3, 1893.

NEWS AND MISCELLANY.

Philadelphia Academy of Surgery.

THE SAMUEL D. GROSS PRIZE.

The Quinqennial Prize of One Thousand Dollars under the will of the late Samuel D. Gross, M. D., will be awarded January 1, 1895.

The conditions annexed by the testator are that the prize "Shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the successful competitor, who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to Dr. J. Ewing Mears, 1429 Walnut St., Philadelphia, before January 1, 1895.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committe will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

The next meeting of the Pennsylvania State Medical Society will be held in Gettysburg, May 15th, 16th, 17th and 18th, 1894.

It is expected that the historic associations of the famous battlefield will attract an unusual attendance. Those desirous of presenting papers are requested to notify the Committee of Arrangements at an early date.

The following are the Committee of Arrangement:

E. E. Montgomery, M. D., 1715 Walnut St., Philadelphia, *Chairman*; Isaac C. Gable, M. D., York; Geo. S. Hull, M. D., Chambersburg; John C. Davis, M. D., Carlisle; Henry Stewart, M. D. Gettysburg; Geo. Rice, M. D., McSherrystown; E. W. Cashman, M. D., York Springs.

Improved Service to Cincinnati & St. Louis.

The Baltimore & Ohio Southwestern Limited, leaving Market Street 11.26 A. M., and the fast Express, leaving at 9.58 P. M., and leaving 24th and Chestnut Streets 11.42 A. M. and 10.15 P. M., for Cincinnati and St. Louis, are now equipped with a complete Dining Car service, built expressly for these trains by the Pullman Company. Pullman Dining Cars are also attached to Royal Blue Line trains leaving Market Street 11.26 A. M., 7.22 P. M., and leaving 24th and Chestnut Streets 11.42 A. M., 1.35 and 7.38 P. M. daily for Baltimore and Washington.

Of Interest to Travelers.

The Baltimore and Ohio Railroad announces that they have placed on sale round trip tickets at reduced rates to the Winter Resorts in Florida and the South, and also to such points of interest as Luray, Natural Bridge and Gettysburg. This company has also arranged to place on sale excursion tickets to San Francisco and other points in California on account of the Mid-Winter Fair, at unusually low rates. Excursion tickets are now on sale to Baltimore and Washington via the famous Royal Blue Line.

With its vestibuled train service via Washington to Cincinnati, St. Louis and Chicago, the B. & O. is in the best of condition to handle western and southern travel. That the line is a popular one, is attested by the immense World's Fair business handled this summer.

Those contemplating a trip west or south this winter, should write to James Potter, Div. Pass. Agent, B. & O. R. R., 833 Chestnut St., Philadelphia, Pa., for rates and other information.

THE

MEDICAL AND SURGICAL

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ORIGINAL ARTICLES.

THE RELATION OF DISEASE AND OF MORBID CONDITIONS OTHER THAN THOSE LOCATED IN THE EYE TO THE FORMATION OF CATARACT.*

G. E. de SCHWEINITZ, M. D.†

The etiology of cataract is by no means always clear, and independently of the studies which pertain to the pathological anatomy of opacity of the crystalline lens, much interest resides in the causes which may originate clouding of this structure. I omit entirely reference to the influence of age, sex, occupation, heredity, diseases of the eye, and accommodative strain, each and all of which are important factors, and desire to call attention to those cases which bear some relation to nutritive disturbances, in their turn dependent upon constitutional disease, or upon more localized extra-ocular conditions. It is evident that trustworthy information on this point could be obtained, were it the custom of general practitioners to make as careful examination of the transparent media and fundus of the eye as they do of other organs, in the study of the symptomatology of the cases of general disease which come under their care. In the absence of such systematic examinations, ophthalmic surgeons are forced to gather the evidence, except in a few instances, from reports scattered here and there through the literature, many of which are valueless, inasmuch as they prove nothing more than probable coincidence. Therefore this topic has been introduced for the consideration of a general medical society, hoping that it may stimulate research in this line. Doubtless useful data could be gathered were general practitioners and ophthalmologists—serving at the same time in large hospitals—to combine their efforts in the study of each case of constitutional disease from its beginning to its close. How much reliable information would thereby be added to the already large store of knowledge belonging to medical ophthalmology can only be imagined.

For convenience of study, I have arranged the cases in which disease bears some relation to the formation of cataract into:

I. IDIOPATHIC FEVERS AND ALLIED DISEASES.

(*a*) *Typhus and Typhoid Fever.*—It is a matter of common observation that the clinical history of cataract formation will not infrequently reveal that the patient refers marked failure of sight to some decided febrile disturbance, but it is difficult to prove that this has positively been the cause of the depreciation in vision. For example, Galezowski[1] investigated 4776 cataracts with reference to their etiology, and attributed by far the greatest number —1528—to age, as they occurred between the sixtieth and the seventieth years.

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*Read before the Philada. Co. Med. Soc., 1893.

†Clinical Professor of Ophthalmology, Jefferson Medical College; Professor of Ophthalmology, Philadelphia Polyclinic, etc.

[1] "De l'Etiologie de la Cataracte," Recueil d'Ophth., p. 17, 1883.

therefore, the majority were representatives of a retrograde process in a changing organism. The remainder, exclusive of those which occured under the influence of injury and heredity, were ascribed to excesses, accommodative strain, and finally, to debility of the body as the result of constitutional and febrile illnesses—that is to say, this debility hastened the cataractous process.

A little more to the point, but none the less of indifferent value, are the observations of Trelat[2] on cataracts following typhoid fever, in which he describes double, semi-soft cataracts in a young girl which began to develop during convalescence from typhoid fever. Arens[3] examined two young people, brother and sister, who developed double cataract, which became total in one eye, after an attack of typhus fever. A good result after extraction was secured. Fontan[4] reports three cases of post-typhoid cataract (cataracta punctata) which he believes were the result of mechanical obstruction of the circulation. Two of these cases, one a twenty-eight-year-old man and the other a forty-two-year-old woman, progressed to maturity and required extraction. There is no evidence from this paper, however, than Fontan was aware of the condition of the transparent media before the typhoidal attack.

(*b*) *The Exanthemata.*—As the malnutrition of typhus and typhoid fever may perhaps be responsible for lenticular opacities, likewise this is true of the various exanthemata, quite independently of the fact that these diseases may cause local inflammatory conditions which would determine the opacification. Romièe,[5] for example, analyzed 44 cases of cataracta punctata, and attributed the pathogenic cause to typhoid fever 17 times, variola 7 times, and scarlet fever 3 times. Chlorosis was made responsible 7 times, and the remaining 10 instances were ascribed to diverse maladies—suppuration, heart disease, rachitis, etc. The author seeks to explain the lenticular opacities by an increase in the density of the serum and changes in the relation of the lens to the aqueous humor.

(*c*) *Whooping-cough.*—For the most part, the reports concerning the relation between whooping-cough and cataract formation are vague, as, for example, such indefinite cases as were reported in pre-ophthalmoscopic days by Wright,[6] who records the case of a baby, aged eighteen months which was able to see for twelve months, then had whooping-cough, and afterward cataract.

(*d*) *Malaria.*—Inasmuch as severe malarial fever of any type may be accompanied by lesions in the vitreous and the choroid—for example, hemorrhage, which after absorption leaves membranous opacities and areas of atrophic choroiditis—there is no reason why cataract should not form. A more direct connection than this seems doubtful. Bagot,[7] however, describes two cases in mulattoes who, directly at the close of a violent malarial illness, suffered from diminution of visual acuity, and a few months later double soft cataract was evident. After operative interference the visual acuity returned to normal, and there were no lesions in the fundus oculi.

(*e*) *Epidemic Influenza.*—During the prevalence of epidemic influenza, or la grippe, so fresh in the minds of all of us, a large amount of attention was directed to the ocular lesions, and a great variety of affections, inflammatory and otherwise, which occurred in the eyes of the sufferers were attributed, and no doubt in many instances rightly, to the influence of this extraordinary disease. It would be out of place to attempt a review of the literature, which is very considerable, but as an example of what was observed, I may quote a single analysis, namely, that of Rampoldi.[8] Among 532 eye patients whom he saw during the months of February and March, 1890, there were 48 who had acquired their ocular trouble during or after an attack of influenza. These affections were acute conjunctivitis, conjunctival abscess, abrasion of the corneal epithelium, corneal infiltrations, corneal abscess, iridocyclitis, serpent ulcer, serous iritis, choroiditis, detachment of the retina, and affections pertaining to the external and internal ocular muscles.

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[2] Gaz. des Hopitaux, 1879, p. 417.

[3] "Zur Pathogenese des grauen Starrs nach Typhus," Abstract, Nagel's Jahresbericht, 1885, vol. xvi. p. 428.

[4] Rec. d'Ophth., 3 serie, 9, 1887.

[5] Journal de Med. de Bruxelles, 1873, quoted by Fontan, loc. cit.

[6] Western Med. and Phys. Journ., Cincinnati, 1827-28, 1, 428-431.

[7] Annales d'Oculistique, November, 1891, tome cvi. p. 338.

[8] Ann. di Ottalm., vol. xix., 1, p. 70. Abstract, Archives of Ophthalmology, vol. xx. p. 295.

Therefore, it is not unlikely that this disease, producing such serious inflammatory lesions, may be followed by cataract, and this probably is the explanation of such cases as have been reported.

One case of several occuring in my practice may be quoted: Private patient, female, aged fifty-five years, applied for treatment on the 25th of July, 1891; in good health except during the winters of '90 and '91, when she had sharp attacks of la grippe. Following these, vision began to fail, associated with a dull, aching pain in the eyes. In the right eye there were large striæ in the lens down and in; the optic disk a vertical oval, of good color, but with undue broadening of the scleral ring. In the left eye large punctate opacities in the posterior cortical and also in the vitreous. No hemorrhages in the eye-grounds. Previous to these attacks of la grippe the media were clear. Now it is very evident that one of the common lesions of influenza was present in this patient, namely, vitreous disease, which in its turn was no doubt responsible for the formation of cataract that has since gone on to maturity in the left eye.

II. CONSTITUTIONAL DISEASE.

(*a*) *Gout.*—This ubiquitous disease has been made responsible for a great variety of ocular affections, and, naturally, cataract has not escaped. Zychon[9] contributes an article upon the influence of gout in ophthalmic disorders. Michel, who abstracts the article in the *Jahresbericht f. Ophthalmologie*, vol. xvi, p. 318, somewhat sarcastically states: "We know from Zychon's teacher, Galezowski, that gout has been made responsible for all possible and impossible eye diseases, and so we are not surprised when to the list of gouty ocular affections the following are added: lithiasis of the lids, dry eczema, subconjunctival ecchymosis, conjunctivitis, calcareous degeneration of Bowman's membrane, scleritis and iritis, choroiditis and cyclitis, retinitis and choroido-retinitis, *cataract*, glaucoma, arterial thromboses, muscular palsies, and, finally, migraine." Now, in spite of Michel's unnecessary criticism of this author, many of these affections are undoubtedly gouty, and because the uveal tract falls under its baleful influence cataract may be indirectly caused by this disease, but not, however, without the intervention of inflammatory lesions, which attack those portions of the eye particularly concerned in the nutrition of the crystalline lens.

(*b*) *Rachitis.*—Punctate cataract—if the report of Romièe[1] may be credited—sometimes occurs in connection with rachitis, and Nicati[2] brings the total cataracts (not congenital) which are sometimes found in children into etiological relationship with rachitis.

One form of cataract, variously called zonular or lamellar, which anatomically consists of a narrow zone of degenerative change in the lens fibres situated between the nuclear and cortical areas, has often been attributed to rachitis. The true cause, however, is not certainly known. The congenital variety is probably due to some developmental defect; in the form arising in early infancy some fault in nutrition has occured; most often the subjects are rachitic and present the teeth and cranial asymmetry peculiar to this affection. A history of convulsions is common, and the dental defects which are present in the form of lines, furrows or terraces, running transversely across the incisors or canines, are considered by Hutchinson tobe due to the mercury which in all probability was given for the convulsions, which in their turn caused the cataract. Therefore, the cause does not reside in rachitis itself, but in the frequent, severe, and long-continued convulsions to which its subjects are liable. Moreover, as Knies,[3] quoting Arlt, points out, the cause does not pertain alone to the general convulsions, but to the disturbance of the lens brought about by the severe ciliary muscle-cramp which is said to be present in all universal convulsive affections. Such a result can obtain, however, only in the earlier years of life, while the process of development in the lens is still an active one.

(*c*) *Constitutional Syphilis.*—This disease, like other affections which are prone to attack the uveal tract, is not infrequently followed by secondary cataract as the result of disturbance in the nutritive processes of the eye. Some authors, however, have described so-called true syphilitic cataract. For example Bos[4] records several examples from Badal's clinic, and refers to others which have been seen by Heller[5] and Romiée.[6] He divides these cases into two classes: 1. Capsular cataracts which are associated with iritis, etc.; 2. Lenticular or true cataracts, which are rare and directly due to syphilis. They are soft and appear in the second period of this disease, presumably without the intervention of inflammatory processes in the ocular coats.

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[9] "De la Goutte oculaire," Rec. d' Ophth., 1885.

[1] Loc. Cit.

[2] "Cataractes et Lesions dentaires des Rachitiques," Abstract, Jahresbericht f. Ophthalmologie, 1879, vol. x. p. 341.

[3] Die Beziehungen des Sehorgans und senier Erkrankungen zu de ubrigen Krankheiten des Korpers und seiner Organe. Wiesbaden, 1893, p. 467.

(*d*) *Diabetes.*—The usual answer to the question "What is the most frequent ocular lesion in diabetes," is "cataract." Ever since the observations of France,[7] in England, and the still earlier ones of Mackenzie and Duncan, as well as those of Von Graefe, to the present time, an enormous literature has accumulated with reference to the relation of saccharine diabetes to the formation of cataract, and its influence upon operative interference in this disease. It has become the rule to examine the urine carefully for sugar in all cases of cataract, especially when it develops in young subjects, and it is well known that in fully 1 per cent. of the cases sugar will be detected, and, moreover, that the cataractous lenses of patients the subject of diabetes mellitus occasionally contain sugar. From the experimental standpoint, especially the researches of Mitchell and Deutschmann, it is known that the injection of large quantities of salt or syrup into the tissues of the lower animals may cause opacity of the lens, the result probably of the extraction of water from the lens and interference with its nutrition. We also have in evidence the occasional spontaneous disappearance of diabetic cataract, in some instances corresponding with a diminution of the amount of sugar in the urine. Knies thus summarizes the various theories which have been brought forward to explain the connection between diabetes and cataract.

It may result from: 1. A general marasmus. The objection to this hypothesis is that in very high grades of depraved nutrition occurring in diabetes quite frequently there is no cataract. 2. The abstraction of water from the lens by means of the sugar in the tissues, which, in fact, very frequently, if not as a rule, is found in the lens, and more often in the aqueous humor and the vitreous. If this were true, however, after a time all diabetes should suffer from cataract, which is not the case. Besides, as Leber has shown, both the opaque and the clear lens may contain sugar in diabetic patients, and Becker has described cases in which in one eye the cataractous lens contained sugar and in the other it did not. 3. Finally, is the theory that the sugar contained in the aqueous chamber undergoes a change into lactic acid, which in its turn causes the cataract. This theory has no foundation, inasmuch as the aqueous humor is alkaline, even though there be diabetic cataract, and, in the second place, the opacity does not begin in the anterior cortical portions of the lens.

Touching the pathology of this affection, and throwing some light upon the relationship between the disorders, Deutschmann[8] examined four cases of diabetic cataract, finding proliferation of the layer of pigment cells on the posterior surface of the iris, a condition which had previously been described by Becker. In the lens were vesicular cells (blasenzellen) and all the changes from normal nuclei to complete nuclear disintegration. Deutschmann concludes that the opacity in the lens is due to a necrotic tendency of the epithelial structures, just as the same tendency is shown by all epithelial tissues in this disease. If the epithelium is normal no pathological process of diffusion takes place, no matter if both vitreous and aqueous contain sugar, but when necrosis of the lenticular cells occurs abnormal diffusion currents are set up and produce opacity. Referring to these researches, and others like them, Knies points out that in certain cases the iris is more or less changed—sometimes atrophic, sometimes slightly inflamed—in other words, uveal tract inflammations may be present in diabetes. The development of cataract, then, belongs not so much to the presence of sugar, but is an intoxication symptom —a species of auto-infection.

The relationship between diabetes and the formation of cataract, which has been accepted for many years, has recently been questioned in a publication of Manthner's.[1] His study includes a large number of cases seen in Carlsbad. An editorial published in the *Medical News*, March 18, 1893, reviews this paper and from it I extract the following quotation as pertinent to the subject: "In most of the cases in which defects of vision were found, these could be as readily attributed to concomitant conditions, such as age, impaired nutrition, and other intrinsic influences. The number of cases of diabetes mellitus in which cataract exists will, at best, be found to be exceedingly small. It is pointed out that the peripheral striation of the lens sometimes found in diabetes, and especially in the inferior median quadrant, is quite common, and becomes progressively more frequent in individuals that have passed the fiftieth year of life. Among the influences that might be considered as favorable to the development of cataract are: The displacement of water in the fluids and tissues of the body by the presence of sugar; a diminution in the resistance of the walls of the blood-vessels as a result of the pathological metabolism, of toxic substances that give rise to inflammation and degeneration; the marked marasmus; complicating or intercurrent affections. If the ocular changes were due to the loss of water, they should likewise occur in simple polyuria. It is more than doubtful that opacities of the lens result from the presence of sugar, for there is evidence that the lens normally contains sugar. The development of cataract in an elderly person whose urine contains sugar does not constitute sufficient ground on which to make glycosuria responsible for the loss of transparency of the lens, for it is known that in the large majority of cases of senile cataract the urine does not contain sugar. The conclusion is reached that the presence of sugar in the fluids of the eye does not lead to any disease of the organ of vision, and especially not to the development of cataract. In a small percentage of cases of diabetes mellitus, however, the excessive elimination of sugar and of water does lead to the development of cataract."

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[4] "Des Cataractes syphilitiques." These de Bordeaux, 1884.

[5] Wien. med. Wochenschr., 1877, p. 559.

[6] Loc. cit.

[7] Guy's Hospital Reports 1859, vol. i, p. 237.

[8] Graefe's Archiv. xxxiii., Abth. 2, p. 229.

III. Local Diseases.

(*a*) *Diseases of the Heart and Atheroma of the Vessels.*—From time to time diseases of the heart and of the bloodvessels have been brought forward to explain the existence of cataract. One of the earliest communications on this subject is a report, by Furneaux Jordan,[2] on the relation of cataract to heart disease. Nineteen cases are reported: 2 under twenty years of age, 7 between forty and fifty, 5 between sixty and seventy, and 5 past the seventieth year. These patients suffered from various forms of organic cardiac lesion and had cataract. Other than this, no relationship was demonstrated; but, as will be noticed, the majority of the cases were at that time of life when cataract is likely to occur in the absence of constitutional disorder. The cases, however, are quoted for the reason that it was an attempt to gain some information in regard to the etiology of cataract, and, as has been observed in other cases, there is an occasional relationship indicating that vascular disturbances are in some way responsible for opacification in the lens. Romiée (*loc. cit.*) ascribes several cases of cataracta punctata to heart disease.

A more modern view of a somewhat analogous relationship is the theory of Michel, that circulatory disturbances, and particularly atheroma of the carotid, may be responsible for the formation of cataract. Michel[3] came to the conclusion that opacity in the lens substance was a symptom of a local or general disturbance, and that so-called senile cataract depended upon sclerotic changes in the walls of the carotid. He analyzed 53 cases: in 14 of them there was monocular cataract, with atheroma of the carotid on the same side; in 14 there was double cataract which was more developed and had begun earlier on the side of the greater atheroma; in 9 cases of double cataract these had developed simultaneously with a double carotid atheroma; and in 8 cases of cataract there was sclerotic change in the carotid, and on the same side the presence of a swelling in the thyroid gland, or goitre.

Other observations on the same subject have been brought forward, for example, in the thesis of Karwat[1], which adds a series of cases confirming those already reported by Michel, viz., that there is a relationship between atheroma of the carotid and the formation of cataract.

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[1] "Amblyopia Diabetica," Internationale klin. Rundschau, 1893, Nos. 6, 7, 9, 11, 16, 24, and 25. Abstract, Centralbl f. prakt. Augenheilk., August, 1893.

[2] British and Foreign Medico-Chirurgical Review, 1857, vol. xix. p. 484.

[3] "Ueber den Zusammenhang von ocularen Storungen mit Storungen im Circulationsgebiete des Carotis," Sitzungsber d. physik. med. Ges. zu Wursburg, 1881, Nr. 6. And "Das Verhalten des Auges bei Storungen im Circulationsgebiete der Carotis," Festschrift zu Ehren Prof. Horner's, 1881; S. 1. Abstract, Nagel's Jahresbericht, vol. xii. p. 323.

On the other hand, Becker,[2] with the help of Adolf Weil, investigated 53 cataract cases, among whom disease of the carotid was evident in only 16 ; in 37 it was not present. Among the 16 were 6 persons with atheroma more developed on the side of the lens first affected ; in 10 cases this was not the sequence of events. Moreover, this was found only in individuals who had passed the fortieth year. In all four cases of one-sided cataract the condition of the circulation in general, and especially of the carotid, was normal.

(*b*) *Nephritis.*—Naturally, the various types of so-called Bright's disease, and the widespread lesions which they may produce throughout the body, have been brought into connection with the formation of cataract. Deutschmann,[3] after reporting 21 cases of lenticular opacity in which he had found albumin seven times, and six times established the presence of nephritis, called attention to the possibility of a connection between the two diseases. Still later, in 1881, the same observer[4] found among 53 cataract patients 9½ per cent. cases of Bright's disease, and again refers to the relationship between albuminuria and the development of lenticular opacities, quoting Becker, who had in a communication disputed his conclusions, and yet found from 2 to 18 per cent. of the cases suffering from albuminuria. In still a later communication Deutschmann[5] reports the examination of 230 patients with uncomplicated cataract, among whom 5 per cent. were undoubtedly nephritic, and 11.1 per cent. probably affected with Bright's disease.

This communication was followed by one from the pen of Landesberg,[6] who describes the examination of 376 patients with uncomplicated lenticular opacity, finding sugar alone in the urine of 3 of them, sugar and albumin in 2, and albumin in 44—therefore 327 with normal urinary analysis and 49 abnormal—and concludes very properly that albumin and cataract may be associated as a coincidence, but that the presence of albumin does not necessarily mean the existence of Bright's disease.

In 1886 Rothziegel[7] found albumin in more than half of his cases, and attributed this large percentage to the fact that he examined them at many intervals during the day. He describes 15 cases of chronic nephritis with cataract, and comments upon the arterial lesions which may be present, and particularly atheroma of the carotid.

Finally, I may refer to the researches in 1887 of Evetzky,[8] who, desiring to investigate the trustworthiness of Deutschmann's albuminuria theory, divided his methods into three portions: 1. He examined 200 cataract cases for albumin. Of these, 35 were under fifty and 165 older than fifty. In 38 he found albumin—that is, in 19 per cent. of the cases. In 16 cases the albumin was a constant feature, and in 9 per cent. there were albumin and tube casts, and these usually in cases under fifty years of age. 2. He examined 97 cases of chronic nephritis, 70 under fifty and 27 older, and found the following eye-complications: albuminuric retinitis, cataract, posterior synechia, opacities in the vitreous, detached retina and synchisis scintillans. Cataract, always incipient, was found in 8 cases, or 8.2 per cent., and 1 of these was an anterior polar cataract which had existed for many years, while 7 of the cases were in old people. 3. He examined 584 old people with the ophthalmoscope, and found 204, or 45.2 per cent., with cataracts, usually incipient. Of these there were 2.09 per cent., in the sixth decade, 43.75 per cent. in the seventh decade, 52.6 in the eighth decade, and 66.6 per cent. in the ninth decade. Their urine was examined, and in 59 cases, or 10.5 per cent., albumin was found, and in 1.6 per cent. tube casts. Of the cataract cases 10.5 per cent. showed albumin; of the non-cataractous cases 9.8 per cent. True nephritis was found among the cataractous patients in 0.8 per cent. of the cases, and 2.1 per cent. of the non-cataractous patients. Therefore, he concludes that albumin does not mean nephritis; that nephritis and cataract may combine; that in young nephritics there is no cataract, and in old ones not more usually than in those who are without the signs of Bright's disease.

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[1] Beitrage zur Erkrankung des Auges bei Karotis-atherom. Inaug. Diss., Wurzburg, 1893.

[2] Zur Anatomie der gesunden und kranken Linse. Weisbaden, 1883, p. 184.

[3] Graefe's Archiv, 1879, xxv., Abth., 4, p. 24.

[4] Ibid., xxvii., Abth., 1, p. 315-317.

[5] Ibid., 1883, xxix., 2.

[6] Ibid., xxx., Abth. 4, p. 143.

[7] Allg. Wien med. Zeitung, Nr. 30, 1886.

[8] Archives d'Ophthalmologie, July and August, 1887.

Thus it will be seen that while it is of the utmost importance, both in determining the prognosis of the affection and also that of operative interference, to examine the urine of every cataract patient, and while albumin and sometimes tube casts may be found, no causal relation has been positively established between nephritis and cataract.

(*c*) *Nervous Diseases.*—We have already determined that zonular cataract, which has been found in association with rachitis, is more likely due to convulsions, or to local cramp in the ciliary muscle, than to the disease itself. In like manner, those examples which have been found in connection with other complaints, more particularly belonging to lesions of the nervous system, for example, epilepsy are explainable by the presence of convulsive disturbances. Thus, Logetschnikow[1] describes 15 cases between the ages of sixteen and thirty-seven, who suffered from general clonic convulsions and developed total cataract. Their vision had been good, with the exception of one case, before these nervous phenomena manifested themselves. He discusses the possibilities of other causes for cataract and practically eliminates them, and concludes that the development of cataract is in relationship not alone with the convulsive seizures, but with the nervous lesion which is the basis of the convulsive efforts.

Meningitis has been responsible for the formation of cataract in young individuals. Bock[2] has reported 5 cases between the ages of thirty-four and thirty-nine who suffered from cataract, underwent an operation, and secured good vision. He excluded other causes of lenticular opacity except the likelihood that the disease followed the meningitis from which they suffered. Examination of the eyegrounds seemed to show that two may have had optic neuritis, but none the less they did well after operation. There were no convulsions.

Sewill[3] reports an interesting case of orbicularis spasm on the right side of the face and the development of cataract. The spasm was caused by a carious tooth and ceased on its removal. He refers to trophic changes in connection with the trigeminal ganglion as a possible explanation of these phenomena.

(*d*) *Diseases of the Skin.*—Mooren, quoted by Norris, asserts that chronic skin eruptions may favor the development of cataract by causing creeping inflammatory processes within the eye, and Förster believes that it is not impossible that chronic skin affections may favor to the development of a depraved nutrition, which in its turn produces cataract by alterations in the nutrition of the lens.

Rothmund[4] describes an unnamed exanthem, the pathological anatomy of which was a chronic parenchymatous inflammation of the skin, the papillary layer and rete Malpighii being chiefly affected, which appeared in a number of children and was associated with the development of lenticular opacity. This began between the fourth and sixth years, although the safffikenction was manifested between the our th and sixth months. The cataract commenced in stripes, but quickly developed and became complete in several days. This skin affection was compared with vitiligo, keloid, and ichthyosis, but had sufficient individual peculiarities to separate it from each of them. No good explanation was given of the cause of the opacity, except, perhaps, that the chronic parenchymatous inflammation of the skin was associated with an analogous condition of the lens.

Nieden[5] has described the case of a girl, aged twenty-two years, who developed cataract rapidly, the opacity being preceded by a teleangiectatic swelling of the capillaries of the face. Referring to the well-known relation of diseases of the uveal tract to the development of cataract, and to the relation of atheroma to its production, he thinks the dilated capillaries may have been an indication of a vascular disturbance within the cranial cavity which was responsible for the passage of the lens into opacity.

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[1] Monatsbl. f. Augenheilk., Jahrgang x., 1872, p. 351.

[2] Wien. med. Wochenschr., Nr. 39, 1889.

[3] Brit. Med. Journ., May 10, 1884, p. 899.

[4] Graefe's Archiv. f. Ophthalmologie, 1868, vol. xiv. p. 157.

[5] Centralbl. f. prakt. Augenheilk, December, 1887, p. 358.

IV. TOXÆMIAS.

Although, perhaps, not belonging strictly to the list which I have discussed, it would seem, in closing, proper to refer to one or two forms of cataract which have developed, if not under the influence of, at least in association with, the action of certain drugs. Foremost among these are the observations which relate to the development of opacity of the crystalline lens in connection with ergotism, or, as it is often called, the formation of raphanic cataract.

Thus Meier[1] observed 23 cases of ergotism, 15 females and eight males. Their ages were between ten and sixty, the poisoning lasted from six weeks to three months, and the chief symptoms were cramps and convulsions. He attributed the disease either to the action of ergot on the ciliary nerves, or to the convulsive disorder. Numerous papers have appeared upon this subject, to which further reference is unnecessary, except to say that, as, for example, in those cases reported by Tepljaschin,[2] 27 in number, occurring during an epidemic of ergotism, and for the most part under thirty years of age, the development of the cataract was ascribed rather to the convulsive disorder than to any distinct action of the poison itself. Hence it seems proven that the lenticular opacity results from the violent general convulsions and not directly from the ergot.

Among other toxic agents that are known to cause cataract is naphthalin. Experimentally, cataract has been produced with this drug by feeding it to rabbits, but it should be mentioned that, in addition to the lenticular opacity, there are general disturbances as well as changes in the retina and vitreous. Other drugs and toxic agents have in a vague way been suggested as a possible cause of opacities in the crystalline lens, but it is likely that these relationships have existed in the minds of the patients rather than in reality, and before they can be accepted, direct experimentation, especially upon the lower animals, will be required.

Naturally the possible relationship between cataract and general disease has often been discussed, but, as may be seen from the cases quoted this evening, the conclusion reached by Becker,[3] that a connecting link between constitutional maladies and opacity of the crystalline lens has not been established, remains in a large measure unshaken. To quote again from this author: "The influence of the constitutional condition of the organism expresses itself relative to the lens, either that another portion of both eyes first becomes diseased and the pathological changes brought about in the vitreous through this means lead to the formation of cataract, or that the lymph of the body experiences changes, through which, without the evident intervention of other ocular lesions, lenticular opacity develops." None the less, as pointed out in the beginning of this paper, systematic examination of cases of general disease, especially frequent investigation of the transparent media, throw further light upon this subject, and is a research worthy of followers.

The evident influences of eye-strain and asthenopia in its widest sense, together with the changes which this produces in the ocular coats, particularly the choroid, referred to by Schoen and more recently elaborated by Risley, on the formation of cataract is well established. Possibly constitutional diseases permit this influence to be more strongly felt, and thus indirectly aid in the development of lenticular opacities, or, perhaps, a more direct influence can be established. Be this as it may, further critical evidence is needed.

The Reward of Wickedness.

"I never robbed a man but once," said the honest tramp, "and then I was starving. He would not give me a penny, and I couldn't stand the gnawings in my stomach any longer. So I knocked him down and went through his pockets. What kind of a haul did I make? Just one little bottle that read on the label: 'Pepsin; for the full feeling after eating.'" —*Judge.*

THE primordial lesion in neurasthenia, "according to Bouchard," is dilatation of the stomach. This condition he claims exists to a greater or less degree in all neurasthenics.

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[1] Archiv. f. Ophthalmologie, 1862, viii, Abth. 2, 120-124.

[2] St. Petersburg, med. Wochenschr., 1889, Nr. 3.

[3] Loc. Cit.

COMMUNICATIONS.

EXTERNAL URETHROTOMY FOLLOWED BY SEPTIC ARTHRITIS.*

E. D. FENNER, M. D., NEW ORLEANS, LA.

The case which I propose to present to you to-night is in truth one upon which an external urethrotomy has been performed, but the operation itself has been completely overshadowed by the complications that ensued. I lay it before you not to serve as a text for any discussion of septic arthritis, but simply as an example of the severe and unexpected results that sometimes follow an apparently simple and favorable operation. For many of the data I am indebted to Mr. Lovell, R. S. of the ward. John Henry, aged 21, was admitted to No. 2 on June 25, 1893, suffering from urethral stricture. He passed his urine with straining and in a very small stream. This he had noticed three months before, but it had grown progressively worse. As is frequently the case with negro subjects, he denied any previous venereal trouble. On June 27 a filiform was inserted with the intention of passing a Goulé sound. The whalebone was old and defective, and, slipping from the grasp of the assistant who held it was doubled upon itself by the sound and broke off in the urethra.

External urethrotomy was now done, the whalebone extracted (a portion of it was fortunately still in the urethra) and the whole canal was dilated with steel sounds. Considerable traumatism was inflicted upon the penile portion in this operation.

The patient was put to bed and in the evening his temperature was 101 deg. From that time till July 5 the temperature ranged between 99 and 100 deg., when on the morning of the 5th it rose to 103 deg. From that time till the 16th it remained very high but irregular, owing to the use of antipyretics. On the 8th the thermometer registered 105½ deg.; on the 11th it was again above 105 deg. These were the highest records. On July the 16th he was transferred to a medical ward, on the suspicion of typhoid fever.

From the day after operation he complained of pain in the urethra and perineum, but no sign of a phlegmon could be discovered and the urine was only slightly tinged with mucus. With the advent of the high fever came intense lumbar pain, with some tympanites and tenderness over abdomen.

He remained in the medical ward for thirteen days, during which there developed an arthritis of the left wrist, and of the right knee and elbow. His temperature now ranged between 99 and 102 deg., generally being about 100 deg. His condition was one of general sepsis. Abscesses formed and were opened on the shin below the inflamed knee, and in the axillæ. From the right elbow and knee fluid was removed with the aspirator, in which was found a considerable amount of pus. The joints were immobilized with plaster casts, and in the case of the knee an ice bag was kept on for three days, before the plaster was applied.

In addition to these serious joint troubles, on August 10 a profuse watery diarrhœa commenced and continued till the 23rd, when it was finally checked by the lead and opium pill, having been uninfluenced by mixtures of bismuth, salol and chalk. From August 23 the man began steadily to improve. The swollen joints subsided, temperature seldom rose above 99 deg., appetite returned, and on September 1 he got up and has since been able to sit up during the day.

Of course, during this time the urethra has been left to itself; at no time has the man been in a condition to stand the passage of a sound, but some urine passed by the meatus, and before long I hope to be able to pass an instrument and restore the canal. Throughout the case the treatment has been symptomatic. Fever was combated with quinine and phenacetine, and with sponging.

The joints were put at complete rest by means of immovable splints. In the case of the knee a considerable amount of fluid was withdrawn by the aspirator and the ice bag applied for several days.

While still weak and not entirely over the arthritis, the patient is rapidly improving, and we hope will yet recover entirely.

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*Read before Orleans Parish Medical Society, August 9, 1893.

SOCIETY REPORTS.

ORLEANS PARISH MEDICAL SOCIETY.

Meeting October 14, 1893.

Dr. Martin read his paper on

LONG CONTINUED FEVERS IN LOUISIANA.

My desire this evening is to prompt a discussion on a subject which, though not entirely new to the society, is, I believe, most deserving of consideration. I have had to cope recently with a type of fever foreign to any represented in our text books. From older practitioners I learn that these slow fevers of Louisiana, which resist all forms of treatment, and which are sometimes more aggravated than benefited by quinine, are of recent origin in this State. With the many forms of malarial fever we are thoroughly conversant, though it is my belief that the prefix "malaria" is too often used to supply a want in the absence of a diagnosis. In my own brief experience I have known a case of abscess of the liver to have been diagnosed and treated for six weeks as one of malarial remittent fever. Also, a case of pelvic cellulitis, notwithstanding the local pain, was diagnosed as malaria. In such cases, however, a correct solution of the case is generally arrived at before any serious trouble arises. But an error of this kind in the diagnosis of typhoid fever would, at least in my hands, prove fatal. We should bear in mind that, notwithstanding the teachings of our professors, typhoid fever does exist in this community, and to such an extent that it is time for us to eradicate from our minds old prejudices so thoroughly instilled in past years, for there can no longer be a doubt of its existence, and to the extent that we should be prepared to meet it at any time.

Is it not possible that many of the so-called cases of typhomalaria are modified forms of typhoid? May not climatic influences moderate the diseases, for certain it is that few, if any, typical cases have ever originated in our city. Malarial and typhoid fevers are distinct forms and easily diagnosed, making the treatment clear. But another form of continued fever exists, so different in its origin, its symptoms and its cause from either of these two forms that I have deemed it my duty to introduce the subject here to-night and to ask the members of this society to give the matter their time and consideration. This fever, so I have observed, is usually ushered in without any premonitory symptoms. The patient usually complains of feeling dull; the tongue may or may not be coated; the bowels costive; loss of appetite; sometimes nausea and slight elevation of temperature; seldom any functional disturbance. The temperature will vary from 99 degrees to 103 degrees, and the fever will continue from three to nine weeks. Patients are not greatly exhausted by the fever and are sometimes able to keep about their work. One case which I had under treatment, a robust person, was never compelled to lie down during the day, but spent the time in a large arm-chair. The fever lasted ten weeks. In this case, I believe its long continuance was partly due to malnutrition. Nausea complicated the treatment, and the question of treatment became a serious problem, until I had recourse to raw eggs and sherry; this constituted the nourishment during the day, the patient taking as many as half a dozen eggs in twelve hours. At night I gave mulled milk, which proved a soothing and nutritious beverage. Through the entire course of her illness I was at a lost to detect any one symptom sufficiently marked to point to a diagnosis. If malarial, it was not typical in appearance.

For some time I was inclined to believe it septic, but a most careful examination of every organ in the body, repeated several times, failed to substantiate this belief, As regards treatment, I have employed every form known to science without success. Quinine is inert, and antipyretics give but temporary relief. The case will run its course and must be treated symptomatically. My method of managing these cases has always been purely symptomatic, not expectant—relieve pain, regulate the bowels, reduce the temperature, tempt the appetite and trust to luck.

If there are any present whose misfortune it has been to meet with such cases, I trust the results have been more gratifying, and that they have settled upon a diagnosis and a formulated plan of treatment.

I have prepared to-night, to present for your consideration, a number of charts showing the course of the various forms of continued fevers rather than monopolize your time with a detailed account of these cases. I will now submit these charts, which I have borrowed from the New Orleans Sanitarium, believing they will prove of some interest.

DISCUSSION.

After Dr. Martin had read his paper he presented charts representing the three types of fevers of which he had spoken—malarial, typhoid, and the particular type of remittent fever of which he had just spoken, which he said some of his confreres of the country called "slow fever." After the charts had been examined by the gentlemen present Dr. Martin said that as the subject of typhoid fever had been brought up at the last meeting, he had with him a chart of a typhoid case, regarding which he did not think it amiss to say something. The patient had been brought from Lutcher, a saw-mill town some distance above New Orleans. Was taken sick ten days before being brought to the Charity Hospital, where he was received May 21, and the case diagnosed as remittent fever. On May 27th he was admitted to the sanitarium. Up to that time had been taking quinine, and did so after the case was diagnosed as typhoid fever. He became delirious on the 28th and remained so for ten days. Pulse was very rapid and there were marked sordes, a thing you do not often see in remittent fever. Bowels very loose, with bloody stools. The treatment was symptomatic. A little antifebrine was given in whiskey to reduce the temperature—given in simple powder it distressed the patient too much. Strychnine was given as a tonic—that was really the treatment all the way through—antipyretics and strychnine, and he was kept on a milk diet. I believe, too, some ten drops of hydrochloric acid were given three times a day. Hemorrhages were treated with injections of laudanum, which seemed to have a good effect.

Dr. Lowe (in the chair) referred to the importance of the matter and said he hoped every member of the society would have something to say on the subject, and called upon Dr. Sexton to open the discussion.

Dr. Sexton said: Dr. Martin has presented a very interesting subject at a very opportune time. The long continued fevers are on the increase in New Orleans, and every practitioner has more or less of such cases to deal with throughout the entire year. When a student at college I remember that Dr. Bemiss in discussing this subject taught us that two separate and distinct poisons or morbid processes might exist in the system at the same time, each one modifying the other in its clinical history, so as to make a hybrid disease which was neither clear-cut malaria nor the classical typhoid of the older authors. During my practice in Mississippi, as well as in New Orleans, I have had considerable to do with these long continued fevers or the so-called typho-malaria of Wood. I have always considered it a mixed poison of the malarial element, whatever that may be, plus some septic infection.

The majority of cases coming under my observation presented a mixed clinical history, the malarial element of every other day exacerbations, while the septic and enteric symptoms were overshadowed or masked by the more powerful malarial poison. In other cases just the reverse was true.

In my experience with disease I have noticed that real, clear-cut diagnosis or typical symptoms of typhoid are the exception and not the rule. In a considerable experience with typhoid fever, I hardly recall a single case in which all the symptoms of the older writers on typhoid fever are to be found. Either the tongue does not present the characteristic symptoms, or diarrhœa or petechial spots are absent.

May it not also be true that malaria may become modified by the hygenic surroundings and changed conditions of the development of our city? If we were all practical microcopists when such cases come under our care, before beginning the treatment we should examine the blood for Laveran's plasmoidum malarial bodies, which being found (if they are the real cause of malaria), would clearly indicate an anti-malarial course of treatment, which would be quite different if we should find the Eberth's bacillus. But whether these microscopic changes or bacilli are the causes or the results of the disease is not clear, at least to some of us.

I have often been puzzled in trying to think out the etiological process of this disease. Investigators tell us that one case of typhoid fever must originate from another, that the dejecta and infected water play the principal part in the spread of typhoid fever, so just how to account for the typhoid condition in these long continued fevers having no connection whatever with other cases of fever has been very puzzling to me. Not more so, however, than the resistance of these fevers to the action of quinine, though they possessed a distinctive intermittent clinical history—better one day and worse the next. That the fever has a malarial element in it is proven by the fact that it is most prevalent in malarial districts with every-other-day exacerbations. I have always considered it a non-contagious disease, having seen numerous cases where only one member of a large family has been affected with it. In its morbid anatomy it partakes both of the nature of typhoid and malarial fever. In substantiation of the fact that it is malarial fever, plus some other septic infection, I will call the attention of the society to the fact that it is most frequently found where such unhygienic conditions as over-crowding, bad ventilation, sewer gas, bad food and fruits from the market are used. In our city practice, perhaps, sewer gas more often represents the plus element in the etiology of the fever than any other of the causes mentioned.

With regard to its treatment I have usually met symptoms as they arose. Constipation in the beginning of the fever is the rule; to combat this I give from two and one-half to five grains each of calomel and soda at bedtime, providing the patient has never been salivated. In this event I use phosphate of soda, cascara sagrada or some vegetable pill. Later on in the disease I am more cautious about the use of purgatives, and have found good results by flushing out the bowels with antiseptic douches. Pyrexia has to be combatted, and I have usually accomplished this by sponging with tepid or cold water, rolling in wet pack and giving freely of cold water both by mouth and rectum, if agreeable to the patient. When the fever is high I usually keep the head enveloped in ice towels. An admirable diaphoretic mixture is made up of tincture of aconite, spirits of nitre and syrup of squills. More recent remedies for pyrexia belong to the coal tar group, one of which is about as efficacious as the other. I only give such remedies when the temperature is high, usually combining them with a toddy, and not repeating very often.

For the tonic effect of the quinine I usually give three capsules daily, combined with acetanalide or phenacetine to prevent disagreeable head symptoms and to meet the neuralgic element in the disease. I place more dependence on the sponging and cold baths, however, than any internal medication.

Large doses of quinine, while they may act as an antipyretic, will not abort the fever, and are damaging to the nervous system, hence should not be tried. As an intestinal antiseptic I use the emulsions of turpentine with salol or salicylate of bismuth; camphorated tincture of opium is added if there is exhausting diarrhœa. Internal hemorrhage are best controlled by some preparation of opium, and the ice bag. I have had good results from phospho-muriate of quinine compounded with arsenic, as a general tonic, repeated four or five times daily.

Dieting is very important, and should be confined to milk, broths, soups and gruel, nourishing in quality, small in quantity, often repeated. Under this plan of treatment I had perhaps a mortality of about 4 per cent. in the treatment of a large number of cases.

Dr. Dupaquier: It is much to be regretted that the discussion is based on mere conjectures, as we have no record of investigations on the bacteriology and anatomo-pathology of these fevers, the only positive means of determining their nature. But think of the technical difficulties attending these researches. The clinical, like the pathological phase, is undetermined.

The long-continued fever of Louisiana has no definite type; it appears to be *sui generis*.

If it is typhoid, it is very much disfigured, and to make out the diagnosis of that erratic typhoid, I think that the nervous symptoms are of great help (see *Bull.*

de l'Academie de Med., Paris, 5 Sept., 1893, and *Gaz. Hebdom.*, Sept. 30., 1893.)

If it is malaria, it is again a very modified form, as it resists quinine.

Probably a secondary infection, due to gastro-enteric ptomaines, alters the character of the malarial fever, like secondary infection due to the streptococcus alters la grippe and creates the typhoid form of la grippe (see *Bull Soc. de Medicine*, Paris 21, Juillet, 1893). A sure thing is that the influence of climate upon disease is a strong factor (see Dutroleau and Laveran), and most probably in our climate both the universal typhoid and malarial poisons exhibit themselves under the peculiar forms of fevers now under discussion.

Dr. Chaissaignac: I wish first, when it comes to a question of fact, to record my experience in rather a different way from that of Dr. Sexton. I have very frequently seen here in New Orleans typical cases of intermittent fever, either of the quotidian, the tertian, or even the quatran type. I have seen them very clear cut, and in people who had not been out of the city at all; who had marked chill, and had it come back the next day, or the day after, at the same hour. Again neither of these cases has any connection with the other form of the fever of which the doctor states it is his experience that it occurs where the hygienic surroundings are poor and the food bad. I have seen these cases in some of the best families in the city—people who live well, who are cleanly, and whose houses are good and well ventilated and not troubled by any sewage.

Now when it comes to the discussion of this long continued fever, I think we want to decide first what we want to call typhoid fever. Many of us have seen cases that had been recognized as only simple continued fevers, so called, as far as the symptoms were concerned, including the range of the temperature, and having nothing of all typical of typhoid fever, when the patient died, as in some cases I have in mind at the Charity Hospital, and a post mortem examination was made, revealed what we are taught to consider the characteristic lesion of typhoid fever, as far as Peyer's patches are concerned. So we have to decide whether this condition of Peyer's patches necessarily means that typhoid fever has been at work in the system. The two things that we have to determine, then, are (1) what we want to call typhoid fever; and (2) whether we can call typhoid fever only what is put down in the books.

This is why at our preceding discussion I used the term "classical typhoid" fever. Certainly, we have very little of that here, and it is certain also that these fevers we have under discussion are not that, whatever else you choose to call them. If they ever turn out to be due to the same poison as a regular case of typhoid fever, and that poison modified in some way or other, I can not say. They certainly are not the classical form of typhoid fever. We must determine, then, whether we are to consider as typhoid fever every case that shows the characteristic affection of Peyer's patches, as revealed in post-mortem examination; or whether we can call typhoid fever only those cases which in life present what we are taught to consider the characteristic symptoms. If we are to be guided entirely by the nervous symptoms, as it is stated they do in some parts of the world, we would have to exclude the vast majority of these cases at once from consideration. That is one thing very striking, that no matter how high the temperature goes, no matter how delirious the patient may get, they do not experience the typical symptoms of typhoid fever. This is one of the differences experienced; and we also do not have coma vigilis, the murmurings and gurglings, nor the typical bloody stools that we have in typhoid fever; so if it were not for that one point, where the lesion of Peyer's patches has been detected at post mortem, I would state unhesitatingly that we could not consider such a case to be typhoid fever, because the run of the temperature is different, the character of the stools different, and the symptoms, so far as the nervous system is concerned, are different, therefore, if it were not for that one point we could exclude it altogether.

When it comes to treatment of this fever, whatever you choose to call it—long continued, remittent, or anything you please—I believe it is treated very easily, and with very little medication if attention is given to the feeding of the patient. By feeding I do not mean crowding food upon him, but eliminating the indigestible from his diet and allowing him only the liquid or easily assimilated articles. Reduce the temperature by means of baths as well as antipyretics. Under such treatment I believe a large majority of such cases will get well.

Dr. Bruns: I have no experience whatever as a clinician on these subjects, but wish to say a few words as briefly and as rapidly as possible to emphasize the difficulties of the pathological side of the question from the standpoint of a microscopist.

In the first place, I think we may say we have typhoid fever here in a very much modified form, but whatever we have, whether we are able to detect the classical symptoms or not, we must not confuse ourselves and suppose that typhoid fever of the classical type does not arise elsewhere. It is very common in all the Northeastern Atlantic States, where the country is mountainous and hilly. A clinical diagnosis seems to me the simplest way of determining the character of such cases, but we have already heard the difficulties of reaching a correct conclusion. It has been stated that the examination of the blood for the germ of typhoid fever or the plasmodium of malaria is the better way—the exact way. I believe the result are just as uncertain, and they are far more difficult to arrive at. In the first place the germ is very small. I have followed various methods with all the care that I could, and have found different and very conflicting appearances in the specimens of blood examined, and have never satisfied myself that I have seen the crescents of plasmodia, so that in the hands of one who has not special skill and some experience in these things it is not an easy matter to take a specimen of blood and say this is from a typhoid or malarial patient. It is extremely difficult to get a specimen from a patient who has not already been taking quinine, and all the authorities lay down the rule that it is no use to examine the blood if a patient has been taking quinine.

Now as to tyhoid fever cases: when I was a mere student in Philadelphia, I assisted Dr. Meyers of Jefferson Medical College, in making examinations of Peyer's patches in diseases other than typhoid fever, and we found in cases other than typhoid fever the swelling and lesion of Peyer's patches, which seemed to be exactly identical with the characteristic lesion occurring in typhoid fever—as far as we could judge it was the same. I have even seen that in a case of measles in a young child. So the mere finding of Peyer's patches, swollen and showing the usual lesion, I do not think is at all an emphatic diagnostic point. There remains therefore only the cultivation of the typhoid bacillus and its recognition under the microscope—a long and very difficult process, so that from the standpoint of a practical microscopist the difficulty of arriving at a true and logical conclusion is as great as it is with the practical clinician.

To conclude, and simply to throw out a hint, it seems to me a very weak place in the plasmodium theory, or the plasmodium fact, as already held, that in countries like this, where malaria is very rife, we see certain forms of malaria which certainly do not yield to quinine, and where, in fact, those who have most experience seem to think the administration of quinine freely rather does the patient harm than good. I have had no experience of that myself, but it seemed be to the opinion, of those practitioners whom I have heard talk on malarial hæmaturia. I must say that if the plasmodium is the organism that produces malaria, I can not see why quinine should not be administered as in other cases and then ought to do good.

Dr. Matas: This is a very timely topic with us, and although I have not had the pleasure of hearing Dr. Martin's paper, I am glad he has brought the subject up, because it permits me to supplement a paper I contributed to the State Medical Society in 1885 on the subject of "The Long Continued Fevers of Louisiana that Resist Quinine."

Without having heard the doctor's paper, I believe the fever he describes is precisely the same that I brought before the society at that time. As you see, we have already started by calling it simply "long continued fevers that resist quinine." Dr. Martin has called it simply long continued fever, and I believe almost every one is undecided as to giving this fever a specific, distinctive name, which fact is explained in large measure by the uncertainty of our etiological views on the matter.

However, as I stated, I desire to supplement my paper of 1885, because I wish to correct the impressions conveyed, at least to correct the opinions I held at that time. In that paper I first called attention to the great clinical differences that exist between this fever and the usual typhus or typhoid types, and that they certainly were not the typical forms of malarial and typhoid fever as they are recognized throughout the world. In addition to this I called attention to the fact that these fevers were characterized by their absolute intractibility to quinine. That is one of their chief and essential diagnostic and therapeutic features. Another point I brought out was that this fever was lacking in the essential characteristic, particularly of the typhoid state, meaning by that the absence of the typical thermometrical phenomena, the absence of abdominal symptoms as a rule, the absence of the so-called characteristic eruption and the absence of anæmic symptoms which characterize the typhoid state.

To continue with the points brought out in that paper : I had satisfied myself that it was the same fever described by Dr. Guiteras as occurring particularly in Tampa and Key West. He had become thoroughly familiar with the symptomatology of typhoid fever as found in Pennsylvania and other Northern States, and when he came to the tropics and was confronted with this fever he was very much nonplussed, being unable to recognize it as any type with which he was familiar—not at all the type he had considered typhoid in Philadelphia and other Northern cities. After long observations of the fever he came to the conclusion it was a simple thermal fever, as he termed it, that occurred in the tropics, and was no more than the result of exhaustion of the heat-regulating apparatus, brought on by the long protracted heat of those latitudes. He considered the essential feature of the disease simply heat disturbance ; it was a simple fever, that was all. There was no other manifestation of the disturbance—a simple febrile action, with no bowel symptoms, and nothing at all that might call the attention to the condition of the patient except the one fact of the fever. Consequently, he called it a simple, continued, thermic fever, the result of heat disturbance.

Well, I thought this we have here was precisely the same fever, and as far as clinical symptoms are concerned, it is the same as that described by Guiteras.

Now comes the differences. Since 1885 my field of observation has been greatly enlarged, and I have seen a great deal more of this fever. It may be because the number of my patients has increased—at any rate I have seen a great many more cases, which has given me the impression that this fever is increasing in the community. I believe this is also the impression of a great many of my fellow-practitioners. I certainly am called to treat a great many more cases every year, especially in the summer months. I think also that this fever is assuming a more grave character and demands our most careful attention, and that we should come to some conclusion as to its nature and etiology.

My observations have made me change entirely the views I held in 1885, and it is proper that I state the reasons therefor.

In the first place, this fever occurs in the winter as well as summer. That is something I had not observed, except in two cases, when I prepared that paper. There is no heat then, and there should be no disturbance of the heat-regulating apparatus. I have seen such cases long after the heated season was over.

In the second place, this fever does present at times, I agree with Dr. Chassaignac, the characteristics of typhoid fever—there seems to be two types, one typhoidal and the other non-typhoidal. I can cite at least a half dozen cases occuring in the last twelve months in which the typical typhoidal phenomena have presented themselves side by side with the non-typhoidal form, one patient even lying in the same house with another—that is, one with the simple form and one with the typhoidal. One case presenting the usual diarrhœal condition, and the other without diarrhœa. Both running a course of four or five weeks, but one patient taking his own medicine, reading books and newspapers, and doing everything a typhoid patient is expected not to do, while by his side would be a brother, or perhaps a sister, presenting many of the characteristic symptoms of typhoid fever, including the internal troubles, and finally dying of perforation of the bowels.

Thirdly, I have noticed that there have been groups of cases, showing that there is an infection. I have seen three and four cases in a house in certain districts.

I have in mind now three such cases where there were a series of cases. No later than last week I got through with a family in which there were four cases, beginning with a little child, who had fever five weeks, being followed by a little sister, then by a little brother, all presenting the typical manifestations of this disease. I very soon came to the conclusion that there was one cause for all this fever, and have now fully decided in my own mind that this fever is truly typhoid fever—that it is a type of typhoid fever—surely there is no doubt about that. I admit that in the majority of cases it does not present the classical features of typhoid fever, but it does in a number sufficient to prove my position I think. Some of the cases are typhoid just as classical as we read of in the old authors.

Now, if this is typhoid, our sanitarians must investigate the question of means of prevention. Guiteras declared that he did not believe there was typhoid fever in Tampa, and we all know the opinion of Dr. Faget one of the ablest of the older physicians in the city, who held that he had never seen it and did not believe it existed here, that all typhoid cases were imported cases, etc. Guiteras believed it was impossible in Tampa and Key West because the people drank only pure rain water—cistern water, the same as we do here. But our views of typhoid fever have entirely changed. The days of Murchison I think are over, and we are not to believe any more that the existence of typhoid germs depends entirely upon sewerage or drainage. If we admit the bacillary origin of typhoid fever, we must admit other ways of propagation. I think typhoid is spread by many other ways than by water. It is a subject worthy of investigation from a purely sanitary standpoint, and is becoming more and more a serious problem in the mortality record of the city.

The matter of the identification of this fever with typhoid fever, and the difficulties of recognizing its etiology from a pathological standpoint, have been brought up, and the difficulty of identifying the disease by means of the microscope has been well established by Dr. Bruns. I think it is a subject that deserves thorough sifting from a clinical standpoint alone. Although we have nothing to substantiate the character of this fever from a clinical standpoint, I believe it is typhoid fever. But we want a bacteriological diagnosis of this fever, and I think we should formally commission some of our members to take the matter in hand and give us an exhaustive report. It is a sad commentary upon New Orleans, the largest metropolis in the South, situate in the very heart of the malarial country, in the midst of this almost epidemic fever, that we are not able to give some kind of bacteriological information on the subject. We see the work that has been done by the Italians in this direction in the last decade, done in France and Algeria, and even in Texas, and yet we have nothing to say on the matter—we who really ought to be the beacon lights in such investigations. I really hope the matter will be taken up seriously, and that we will entirely efface the bad impressions created by our apparent apathy to a subject of such importance, by a good report in the near future. And I hope particularly that that report may emanate from this society.

But to return to the subject. I think we have sufficient facts to establish this fever, from a merely clinical standpoint, and that the malaria we call "the long continued fever that resists quinine" is not malaria at all. At this point I would mention that Dr. J. J. Kinyoun, of the Marine Hospital Service, made some excellent investigations a couple of years ago upon the intestinal discharges. According to his statement he found, beside the bacillus of typhoid fever, the plasmodium of malaria, both micro-organisms being found together, so he said he had been able to confirm the position taken years ago, that two poisons could exist and thrive in the human organism at the same time. While I have great respect for the ability of Dr. Kinyoun, I am not sure that he may not have been mistaken—especially when you consider the acknowledged great difficulties of the identification of the bacillus, I am inclined yet to doubt, I will not say the correctness of his observations, but at least his conclusions.

I think the treatment is the simplest part of the problem. In that I coincide with the previous speakers, excepting that there are cases which will tax all our resources, therapeutic as well as medicinal. One very important thing we have to a great extent neglected in the application of the treatment of Brown in our typhoid cases is cold bathing. I know it is not a treatment at all in favor in the community, and that with certain people, if you mention bathing, it means a change of physicians. Water is something that is held in perfect horror in the treatment of fevers. This I think is the result of the old treatment of the French nurses in yellow fever cases. The sweating process became so much in vogue that it is hard to dislodge it. It is our province to introduce this method, which, properly applied, is so beneficial. It is one of our most valued resources, but unfortunately too often neglected. The treatment by antipyretics has been a very favorite treatment. These remedies were rather new in 1885, when I referred to them in my paper. I got them as soon as they came out, and remember specially importing antipyrin for a special case. The rapidity with which these anti-thermic coal tar products will reduce temperature is something wonderful, and they have become thoroughly essential. But cold bathing is the only agent that will control pyrexia with safety, and I believe that the rules of Brown should be carefully followed in its application. We must know how to apply it, and must have intelligent nurses as aids. Intelligent nursing is really of the utmost importance in the treatment of these long fevers. I have seen a bath keep down temperature for three or four hours. A very interesting illustration occurred not very far from here, where a bath always kept the fever down for four or five hours at a time. It was applied with great care and precision, a thermometer being used always with the water as well as the patient. Our inability to always control our nurses is one of the great troubles in the application of this method; but we should not forget its utility and the necessity for forcing it upon the community in spite of old traditions to the contrary.

I have little else I might say, except that we all have a great deal to do with these long continued fevers, and that we all know better how to deal with them than how to settle their etiology.

Dr. **Bloch**: This paper has been so fully discussed by the gentlemen who have just spoken, I feel almost anything I can say would be superfluous. I have been very much interested, having had a number of such cases under my personal observation—some outside, but mostly in the Charity Hospital. My efforts to cure them with drugs have been peculiarly fruitless.

Dr. Forcheimer, of Cincinnati, in his very excellent article in Keating's Encyclopedia of Diseases of Children, related how the excavation of a certain street to lay a sewer pipe caused an epidemic of fever all along that street. They called it typho-malaria. It was not malarial fever, for quinine had no effect upon it whatever; it did not yield. It was not typhoid, because there was no source of infection. However, if what Dr. Matas has said is correct, and I believe it is, it was typhoid fever of a modified type, as our experience shows that typhoid can enter the system through some other medium than the water; this must have been something of that sort. Among the many cases I have had of this so-called hybrid fever, I do not believe there has been one of real typhoid fever—not one with sordes on the teeth, with delirium, diarrhœa; not one which quinine has controlled; the only benefit derived was from small doses of quinine and antifebrine, given every two or three hours, which kept down the fever to some extent.

At the last meeting of our society I spoke of three cases in which typhoid lesions were found, the patient presenting no symptoms of typhoid fever. To-night I present the chart of a man who came to the hospital after being sick ten days, presenting at the time the typical symptoms of typhoid fever. The man died. My student held the post mortem for me, reporting no lesion of the intestines.

I have received great benefit from the cold bath, which I have always found acceptable to the patient if properly given; not only has the temperature been reduced, but it has always produced a quieting effect, promoting rest and sleep. I attach great importance to the diet, and will not allow anything of a solid nature to go into the alimentary canal.

Dr. Parham: It would be difficult for me now to say anything that has not already been said. I was very much impressed with the importance of some of the cases, or groups of cases, which Dr. Matas reported. It seems to me that if we could collect data regarding a sufficient number of such groups it would settle the question for us—as to the nature of this fever. Certainly such a thing as typhoid fever exists. Anybody who has been East and seen twelve to fifteen people in one ward of one hospital sick, with the same symptoms, must be convinced there is such a thing as typhoid fever. I must say that I have not seen here what I consider a typical case of typhoid except, possibly, in the Charity Hospital. In my private practice I have not met a typical case of typhoid, though I am firmly convinced that most of these cases denominated continued malarial fever were really typhoid fever of a modified form.

It seems to me that if this society could have data taken of all cases of these long continued fevers that resist quinine for say a year, and at the end of that time have a committee take charge of those reports and draw some conclusions, I believe the results would be of great value. The case of which Dr. Matas speaks, where there was a case of typical typhoid fever, and others alongside of what he terms simple fever—or what Dr. Guiteras called simple thermic fever—where the fever was the only symptom, that is a very remarkable observation, and one which I have never been able to make myself. It seems to me that if Dr. Matas would collect these facts and report them to this society, and then all of us follow suit, reporting all our cases of continued fever, say for a year, that the results would at least be very interesting; and then get all possible data from the records of the Charity Hospital regarding autopsies on such cases. I believe we would in this way get some very valuable data. I think a committee should be appointed to undertake this work, and that every member of this society, especially those who attend the most regularly, should oblige himself to report every case of continued fever which resists the action of quinine.

Dr. Scheppegrell: As Dr. Matas is convinced that this fever is identical with typhoid fever, it may not be uninteresting for me to mention some facts regarding a small epidemic with which I was connected some years ago, when I was practicing in Charleston, South Carolina. I was physician for a phosphate company, which operated about five miles from Charleston, and had a settlement of its own, employing between 300 and 500 workmen. I was called one day to see a case of fever, which in a few days developed all the seeming symptoms of typhoid fever—nose bleeding, diarrhœa, tympanities, etc. About a week later I had two more cases, and then concluded that as all these workmen procured their water from one well (there was an artesian well on one side of the works and a common well about the middle of the settlement, from which most of the workmen drew their water), I concluded that his well was the source of infection, as it received surface water. I had it closed, the pump removed; but about a week later I had five more cases, and a careful investigation showed that, although the pump had been removed, some of the families of the workmen had been taking water from the well, intended for washing purposes only, but the men would come in hot and would drink from the bucket containing this well water. I reported the matter to the president of the company, who had the well filled up and another well dug on the upper part of the hill, and we had no more cases of fever. There were eleven cases in all. Three cases died of intestinal hemorrhage, and the autopsy showed lesion of Peyer's patches as well as hemorrhage.

Dr. Theard: I would have preferred very much to remain silent. The younger members of the profession in these gatherings can spend their time much more profitably by being all ears than by being all tongue—by listening to the words of members of maturer years and wider experience; but since all must contribute their mite, I will have to do as the others do. While the case of which I speak is not directly in line with the discussion, it is one that nonplussed me at the time, and one I think is remarkable so far as heat record is concerned. I diagnosed it and sent in a death certificate to the Board of Health with a high-sounding name attached, but even now I am not entirely satisfied that I knew what was the matter. It might have been something else, but if so I could not detect it.

I was called at night to see a young Italian, aged 24 years, who had been married only thirty-six hours. He had fever at 1 o'clock and went to Dr. Fourguette at 2 o'clock, who prescribed a remedy for fever. At midnight the patient had high fever and again sent for Dr. Fourguette, but he was not in the office and I was called. I placed the thermometer in the axilla, and on looking at it thought surely the column had dropped—it registered 111 deg. I knocked it down and again it went up to 111.° Again I knocked it down, and again it went up to 111.° Again I knocked the column down, washed it, and tried it in my own mouth, where it showed normal. Placed again in the axilla it registered 111.° This was conclusive. As there was vomiting and the pupils seemed larger than normal, I suspected foul play, as the man was an Italian and married only thirty-six hours, but I could not detect any sign of poison. I gave injections of quinine and antipyrin, which brought the fever down to 103 deg. In the course of four hours the patient was dead. As I said I sent in a certificate with a high-sounding term attached, but even now I am perfectly nonplussed. I can think of no condition that might have occasioned such a fever. The thermometer was proven correct, for I tried it next day with another. I tried it with two physician's thermometers. The heat was such that the rise was sensible to the touch. I should much like to know if any others have experienced cases showing such abnormal febrile symptoms, and to what they attributed them.

Dr. Bruns: I would ask Dr. Matas if he has ever seen a malarial temperature of 111 deg. I believe that temperatures of that range can only be of nervous origin.

Dr. Theard: That was the diagnosis sent in. I had to give some diagnosis, but I have been nonplussed and worried over the case ever since. Whatever the cause of the fever I believe the patient would have died. I should like to hear what other disease might have brought on such a condition. I supposed such a high fever might have been experienced in erysipelas—I have heard of it in no other disease.

Dr. Matas: The highest temperatures have always been associated with some heat stroke—especially if the subject has been in the habit of taking intoxicants.

Dr. Chassaignac: I remember distinctly a case where a man recovered after remaining comatose for forty-eight hours, and where the temperature registered was 110¾ degrees. It was a year when we had more cases than in any year I remember. It was during my student days. We had a large number of cases, many of them with exceedingly high temperatures. I think this was the highest I saw registered.

Dr. Parham: I remember cases in the Charity Hospital, during the yellow fever epidemic of 1878, where the temperature went up to 108, 110 and 113.° A remarkable thing was that the temperature continued to go up after death.

Dr. Martin: Possibly you will recall a similar case, where a party broke his neck at West End. We brought him in, and about six hours afterward the temperature in the axilla was 108 degrees. The autopsy proved the diagnosis.

Dr. Theard: In my case there were none of these symptoms present, especially as the case was at night, and my recollection is that the night was cool.

Dr. Kohnke: I can remember clinical cases where I was rather inclined to consider typhoid fever, but feared to entertain the opinion against what I thought to be the prevalent judgment upon the question. After a thorough investigation, I believe we will call many cases typhoid boldly that we would have feared to call typhoid before. They have not changed any, but as in cases of grip at the beginning of the grip season, we hesitate to call it grip, but when we see our contemporaries gradually coming down to grip we fall in, and then call grip what we perhaps thought was grip before, but feared to be too soon.

Dr. Martin then referred to the groups of cases spoken of by Dr. Matas,some presenting the typhoidal type of fever and some only the so-called simple thermic fever, and in some cases both forms occurring side by side, and mentioned a case that had come under his own observation, where a man had been sick with the simple form, and had for a part of the time conducted his business as usual, while in the same bed lay his wife who had an unmistakable case of typhoid fever, all the symptoms being present except the eruption.

Speaking of the giving of baths, the doctor said he did not think any objection would be made to bathing if administered in the way it is given at the Sanitarium. It is really a wet pack. The patient is but on a bed that can be handled easily, and the head is lifted two or three inches. Put the patient on a rubber sheet, and have the water poured on the top at any temperature required. It is generally sprinkled on. The patient does not necessarily have to be taken out of bed. This will bring down the temperature to a marked degree.

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SATURDAY, DECEMBER 2, 1893.

EDITORIAL.

ST. ANTHONY—UP TO DATE.

Ancient chronicles inform us that the venerable and original

"St. Anthony sat on a lowly stool,
And a book was in his hand;
Never his eyes from its page he took,
Either to right or left to look:
But with steadfast soul, as was his rule,
The holy page he scanned.

"We will woo," said the imp, "St. Anthony's eyes
Off from his holy book;
We will go to him all in strange disguise,
And tease him with laughter, whoops and cries,
That he upon us may look.

"The Devil was in the best humor that day
That ever his highness was in:
And that's why he sent out his imps to play;
And furnished them torches to light their way,
Nor stinted them incense to burn as they may—
Sulphur, and pitch, and rosin.

"So they came to the Saint in a motley crew—
A heterogeneous rout:
There were imps of every shape and hue,
And some looked black, and some looked blue,
And they passed and varied before the view,
And twisted themselves about:
And had they exhibited thus to you,
I think you'd have felt in a bit of a stew—
Or so should myself no doubt.

* * * * * * *

"But the good St. Anthony kept his eyes
Fixed on the holy book;
From it they did not sink nor rise;
Nor sighs nor laughter, shouts nor cries,
Could win away his look.

* * * * * * *

"Last came an imp—how unlike the rest!—
A beautiful female form;"

Well! this last effort proved successful, but his Satanic majesty evidently made a miscalculation, for he woke up the good saint so thoroughly that he grasped the situation, experimented with the apples of Sodom, and, eventually clearing his mouth of ashes, waged unceasing war against the entire impish crew. So well have his successors carried on his campaign that the Practical Joker with horns, is compelled to use every means of offense and defense furnished by the greatest engine of civilization—the printing press, and the present incumbent of the saintship, surnamed Comstock, is constantly and from all sides assailed as an 'imbecile,' 'crank,' 'libertine,' 'fool,' 'monster,' etc., etc.; is used to point the moral of that hoary aphorism "to the pure all things are pure;" is proved the 'lascivious incarnation of obscenity;' is pitied 'as one whose object in life is to rake up smut,' and has 'his own morality judged by the amount of supposed immorality that a prurient fancy can succeed in ferreting out.' We tender this canonized unfortunate the assurance of our most distinguished consideration.

The experience and judgment of the Anthony Saints is thus summed up:

"There are many devils who walk this world,
Devils large, and devils small;
Devils so meagre, and devils so stout;
Devils with horns, and devils without;
Sly devils that go with their tails upcurled;
Bold devils that carry them quite unfurled;
Meek devils, and devils that brawl;
Serious devils, and laughing devils;
Imps for churches, and imps for revels;
Devils uncouth, and devils polite;
Devils black, and devils white;
Devils foolish, and devils wise;
But a *Woman, photoed without disguise*
Is the worst devil of all."
(*Altered for the benefit of the present saint.*)

The St. Anthony principles are indorsed by all civilized governments, and are embodied in the laws operating for the suppression of vice and crime. The propriety of such laws, appealing to the common-sense of individual citizens, is unquestioned so long as the interests of the individual are not in conflict with the law. The Federal law of the United States decrees, in effect, that no obscene literature or cuts displaying those parts of the body which it is immodest to expose to view, shall be admitted into the mails, the law presuming that such literature and pictures are sent out for immoral purposes or from mercenary motives which utterly ignore all considerations of public morality. The decision as to what is or is not fit to be admitted into the mails is left to the Postmaster-General and by him to the Inspector of mails.

Inspector of Mails is the official title of the present occupant of St. Anthony's stool. This gentleman has at divers times, in divers places and by divers means made himself to be disliked by certain of the scribes and pharisees—hypocrites, because he has so far departed from the rule of the founder of the stool that he can by no means be induced or compelled to rivet his eyes on the holy page, but persists in scanning unholy pages in search of tracks of the imps who occasioned his predecessor so much trouble.

The REPORTER has not been in sympathy with all the official acts of this gentleman, but it recognizes his great moral courage, his conscientious performance of his duty in the face of stupendous obstructions, that the mistakes he has made have generally been on the safe side, and it measures his efficiency by the amount of obloquy and abuse he has sustained.

In the present instance the REPORTER is in entire sympathy with the U. S. Inspector of Mails. The situation, as given in a circular letter by the company involved, may be summed up as follows: The company manufacturing appliances for the use of physicians issued a catalogue, parts of which were copyrighted, advertising their appliances and giving a number of cuts in illustration of the uses of their articles. Among these cuts were some from photographs of nude models, taken in different postures and undoubtedly within the limits prohibited by law. These catalogues were widely circulated through the mails—professedly sent only to physicians. The manager of the company has been arrested by the Inspector, charged with the violation of the postal laws, on the ground that these laws cover "any print exposing part or all the genital organs of either male or female," and that all prints, books, pamphlets or what not, containing such illustrations, are in violation of the postal laws, no matter for what purpose intended or used.

From this action of the Inspector of Mails, the company, alert to the advertising value of the situation, generalizes to such an extent as to make the Inspector's decision cover all medical literature whatsoever, containing illustrations that would come under the law quoted, and making it appear that the intention was to enforce the law without discrimination. Thus obscuring the point at issue by urging an impending catastrophy to medical literature. This circular was sent to the medical journals in hope of creating sympathy —and possibly of securing a unique advertisement that money could not buy.

The REPORTER believes the action of the Inspector of Mails right. The grounds for action were undeniable. The illustrations are not only objectionable but utterly useless so far as giving physicians any needed information, while it would be an insult to ordinary intelligence to allow a patent advertising sheet to be classed as literature of any kind, much less to claim protection as medical literature or as being of any value to medical men. Furthermore, there is no assurance that this advertising medium goes to physicians only. There is no reason why the law should not here be applied as it would be if the same illustrations were used in the advertisement of any other business.

The assumption that this advertising sheet could be classified as medical literature would be too absurd to notice were it not for the fact that these and kindred illustrations have appeared in sundry journals of more or less medical repute. Such use would indicate a possible value, but a mere glance will show that the change of location has neither diminished the undesirability nor enhanced the utility of the pictures. It will be observed that gynecology is invariably made the excuse for such a display, probably because the protection by copyright was extended only to the weaker sex, and copyrighted plates alone could answer all requirements.

An analysis of one of these alleged medical articles will disclose—(*a*), a double leaded heading exalting some system of posture in the treatment or cure of the indispositions of ladies: (*b*), the initials M. D., appended to some name the profession recognizes as worthy of the article produced: (*c*), an 'apology for calling the attention of the profession to a method of treatment usually overlooked, but of such vital importance, etc., etc.'; a few frayed-out platitudes, with incidental acknowledgement of indebtedness to the dealer, through whose kindness the author is able to present the following very interesting pictures; more platitudes. All together serving to introduce 'these pictures from life which will fully explain themselves without further comment:' (*d*), a series of photographs from nature, of 'the human (female) form divine,' clad in an halo of light more or less concentrated, and folded into postures in which the element of divinity is not obtrusive. Such articles deprived of their illustrations are meaningless. When fully bedecked with the unadorned beauties of nature they amount to the same thing.

There must be some value somewhere, but the exercise of common-sense will speedily discover that no value accrues to the profession at large. For this species of illustration the most radical will not claim artistic merit. To suggest that they are of use in aiding a medical man to the understanding of any subject they have served to illustrate, more than diagrams or conventional figures would, in the same connection, is an affront to the intelligence of the profession. The positions as portrayed are never seen in practice, and it would be both an insult and libel on the profession to intimate that any attempt is ever made by physicians to subject their patients to such exposure.

Useless to the profession, repulsive to the respectable, under the ban of law, such pictures would never be missed from medical literature, and when for any reason they are allowed to masquerade as charts for the guidance of medical practitioners we are of the opinion that science would be much benefitted by a visit from St. Anthony to the journals circulating such frauds.

At present the **Reporter** is not terrified by a prospect of censorial supervision of medical literature.

TRANSLATIONS.

IN CHARGE OF M. B. WERNER, M. D., AND W. A. N. DORLAND, M. D.

TUBERCULOUS TYPHLITIS AND APPENDICITIS.

In *Le Bulletin Médical*, June 25, '93, Reclus observes that the clinical reports of tuberculosis of the cecum have accumulated rapidly during recent years. The cases of Bouilly, Terrier, Hartmann, Reynier, Broca, Roux, Salzer, Billroth and Hochenegg, the anatomical researches of Duguet, Spillmann, Hérard, Cornil and Hanot, and the recent descriptions of Pilliet and of Le Bayon have thrown some light upon this hitherto but little recognized affection. The cases have been numerous enough for one to attempt to tabulate a statement of the clinical manifestations of tuberculous typhlitis and appendicitis. Reclus himself has observed two cases where a long-continued clinical history has been sustained by post-mortem examinations. This affection may manifest itself as a localized tuberculosis without infiltration, without concomitant degeneration of the lungs and other important viscera, developing itself around the ileo-cecal valve and its vicinity without invading the other tissues. This suffices to class this tuberculosis among the surgical tuberculoses; from the moment it is confined to a limited focus and this focus is accessible, in such favorable circumstances intervention is legitimate. Therefore in certain cases—and the observations are becoming daily more numerous—perityphlitic tuberculosis is an ordinary surgical affection.

As to the etiology of this condition the literature is scant; the degeneration here, as in most of the other tuberculoses, seems most frequent in adult age, but the young do not escape; a little boy 10 years of age has been cited as dying from this affection; the greatest number of the cases published, however, have been in individuals who neighbored upon or who had passed thirty years of age. It seems that two distinct anatomopathologic forms may be described, associated with different symptoms: the one a fibrous or hypertrophic and the other an ulcerous variety; moreover these may be combined, or there may be noticed all the intermediate stages between them. The majority of the cases thus far reported have been characterized by an abundant new formation which gave to the degeneration, the appearance of cancer. In this form, the tumor after incision of the abdominal parietes appears fused with the double parietal peritoneum with new membranous formations which cover the intestines and mark their limit; the original form of the cecum and its appendix, the ascending colon, the ileo-cecal valve, and the termination of the ileum cannot be recognized. There is a muscular and a mucous hypertrophy at this point which causes the intestinal wall to measure at times up to three or four centimetres. The lesions ordinarily are most marked around the ileo-cecal valve; the valve is profoundly altered from the beginning; in its place is found an irregular cavity, covered by a partly ulcerated mucosa; the loss of substance is irregular its edges sinuous, the base sanguineous with small rigid villosities. The appendix is bent upon itself and adherent at times in front of the cecum at times behind it; it is lost in the thickness of the false membrane.

The second or ulcerated form may present thickening of the serous and false membranes around the intestinal loops, but these have not the remarkable hypertrophy of the other form; on the contrary the ulcerative process predominates, the mucosa has often completely disappeared, especially at the site of the ileo-cecal valve where ordinarily a veritable cloaca is found due to the destruction and anastomosis of the various intestinal segments. The softening of the cheesy masses in the tunics and the neighboring ganglia have given rise to puriform collections, which run in various directions, but generally make their way towards the abdominal wall; through the resulting fistulae fecal matter and pus escape. These pyo-stercorous canals are often multiple.

There exists a third form which Professor Cornil has especially studied. Often in place of the fecal concretion which forms in the appendix, some foreign body, bone, a fruit seed lodges there and by its presence irritates or perforates the vermiform process and a tuberculous forms, the bacillary colony destroying the walls.

The symptoms of the first form in the beginning is the existence of deep pains in the region, lasting for some hours during the day, then disappearing and appearing anew. This attack subsides only to reappear in a few weeks in a more aggravated form. Constipation accompanies it and may be extreme. On examination the presence of a tumor is demonstrated in the right iliac fossa hard, resisting, bosselated, irregular. In these cases where softening has taken place fluctuation may be pronounced, or the skin becomes red and the abcess opens with the formation of a fistula. The diagnosis becomes plainer still when in place of the extreme constipation a rebellious diarrhœa appears resulting from the abundant and persistent ulcerations of the mucosa. The general health does not suffer in either form at first. As to the treatment of these cases, surgical intervention is the only proper and justifiable course. D.

ETIOLOGY AND TREATMENT OF ABORTION AND PREMATURE LABOR.

Prof. Max Stumpf has collected his material for studying this subject at the Maternity, in Munich, during the period May, 1884, to November, 1889. During this time there were 446 cases of premature labor—184 cases of abortion; 115 cases of *partus immaturus*; 147 cases of *partus prematurus*. The author considers in his studies, in connection with premature labor, the age of the patient, the number of previous interrupted and mature births, as well as their causes and complications.

The treatment in 169 abortions was purely expectant and symptomatic—that is tamponing the vagina and the internal administration of ergot. Of these, 142 recovered without complications; 5 suffered from subsequent hemorrhage; 9 from infectious diseases; of these last, 5 had slight fever and 4 offensive lochia. A comparison of the cases teaches that the retention of the membranes increases the possible infection, but more particularly the dangers of subsequent hemorrhage.

In 11 cases of septic abortion, the author used 3 per cent. solution of carbolic acid as a disinfecting uterine injection. This also acted as a means of inducing uterine contractions, thus aiding in the expulsion of any remaining shreds.

The author believes that the conservative treatment in abortions will be followed by better results, and should not be displaced by active measures more recently advocated.

In *partus immaturus*, Dr. Stumpf is also inclined to wait spontaneous separation and expulsion of the contents of the uterus, adopting active measures only when persistent hemorrhage or symptoms of sepsis set in. The results in *partus immaturus* are less favorable than in abortions. Of 115 women, 5 died of sepsis; 2 of uræmia; 1 from tuberculosis; 1 from hemorrhage. The mortality due to infection treated on the expectant plan was 14.5 per cent., while the operative procedures raised the mortality to 40 per cent.—*Müch. Med. Woch.*, xxxiv, 1892.

W.

A Serious Condition.

Old Lady—Doctor, do you think there is anything the matter with my lungs?

Physician (after a careful examination)—I find, madam, that they are in a normal condition.

Old Lady (with a sigh of resignation)—And how long can I expect to live in that condition?—*Pharmaceutical Era.*

ASCITES—ITS TREATMENT FROM A GYNECOLOGICAL STANDPOINT.

Dr. Gusserou reports cases of ascites, in which disease of the circulatory apparatus such as the liver or kidneys can be excluded, the natural supposition follows that it originates from some disease of the genital organs or peritoneum. In order to make a positive diagnosis an exploratory incision should be made in the median line of the abdomen 6 cm. in length. Puncture is of no avail and often proves dangerous. It is necessary to see as well as feel in order to decide the seat of disease and whether further operative measures would be justifiable.

The various cases coming under this category can be classed as follows:

1. Ascites due to so-called tubercular peritonitis. In a case of peritonitis nodosa, Gusserou was able to effect a cure by incision, washing and draining.

2. Ascites due to papilloma of the ovaries. The cause was discovered in 4 cases only after the exploratory incision. The removal of the diseased ovaries effected the only means of relief.

3. Ascites from carcinoma of the ovaries or peritoneum, In 3 cases all diseased tissue was removed; in 5 others some malignant nodules could not be reached; and in 5 more it was impossible to remove anything. In all cases, however, the incision gave relief; in some improvement; in a few complete cure.

4. Cases of ascites produced by benign disease of the genital organs. In 1 case it was caused by fibroma of the ovary; in 2 by tubal disease; in 9 by ovarian cystoma.—*Schmidt's Jahrb.* No. 9, 1893.

W.

THE BACTERIOLOGICAL CRAZE.

This is the age of germ rabies, and stark madness has overtaken the hygienists and the public with reference to bacteric infection. Every ounce of water we drink and every cubic foot of air we breathe is supposed to be scientifically assayed, and if more bacteria than the approved minimum are found, we are threatened with terrible consequences. The joke of the matter is that the people who are the victims of the craze do not seem to be able to see farther than their noses. They are in agonies of apprehension lest their milkman may have diluted his liquor with bacteria laden water, and they excessively excite themselves if the cubic contents of their sleeping-rooms is below the scientific minimum ; but they pay no regard to the fact that, from morning to night, they are imbibing monstrous doses of bacteria through other media. They never think of the danger of carrying about their person a bank-note which has been bosomed for unlimited time by a reeking fishwoman or costermonger—they box themselves up in a theatre or concert-room packed with inconceivable myriads of germs of all sorts of diseases—they suck grapes which have passed through an endless series of dirty hands, and they smoke cigars which have been lately grasped between the lips and fastened with the spittle of, perhaps, a phthisical tobacco-worker. Lastly, they will cool their glass of champagne at the most *distingue* dinner-party with the ice recently frozen off a ditch which is little better than a cloaca, and they trouble not themselves about its bacteric befoulments. We notice we are moved to these observations by the fact that this latter point has been taken up by the Parisian hygeists, and that laws are being made to control the sale of dirty ice. It has been clearly established that much of the ice used in the most aristocratic cafes and clubs is taken off ponds impregnated with every describable abomination, and that when this ice is melted, myriads of bacteria of every form of virulence are found in a state of activity. We are not to be understood to discourage precaution against the use of foul water or foul air. It is well to be clean, even though we cannot be of spotless purity, but there is no donbt that the bacteric hobby is, at present, being ridden to death, and that any of us who survive for another twenty years will then laugh heartily at the fashionable craze of to-day, just as we now laugh at the iridectomy mania, Koch's tuberculine, or any of the equally *de rigueur* crazes of the past twenty-years.—*Medical Press.*

ABSTRACTS.

CHANCRE OF THE MOUTH.

In the *Medical Record* there is a paper by Dr. Harrison Griffin, with statistics and a report of twelve cases, three occuring in children in one family. In 1200 cases of syphilis the primary chancre was situated in the region of the mouth in twelve cases.

Case 1. Male, aged 9, had chancre of lower lip slightly to the right. He had painful enlargement of cervical and submaxillary glands on the right side; also on left side, but not so marked. Induration not to the same extent as is usually found when the sore is on the penis. A papular eruption appeared on the body soon after. The lad had received the infection by fetching beer for laborers in a pail, and occasionally drinking after a workman who was syphilitic. The boy's father was warned to supply him with a separate towel, glass, cup, etc., and to let him sleep alone; above all, not to let him kiss anyone. He was also removed from school.

Case 2. A brother of the previous patient, aged 12, was some time after found to have a chancre on the right tonsil. The inoculation took place through a stick of candy that the elder brother had put in his mouth after the younger brother had sucked it. The history of the eruption is entirely at variance with the time that usually elapses between the presence of the chancre and the ingress of the eruption in the adult life. In the first case the eruption came out ten to twelve days after the presence of the chancre, in the second case thirteen days after the initial lesion.

Case 3. Sister of above cases, contracted a chancre of the upper lip by kissing her brother. The eruption appeared about twenty-six days after the initial lesion.

Case 4. Male, aged 8, had sore on right tonsil, with enlarged neighboring glands. He had contracted it from impure practices. The history of this case was very decisive.

Case 5. Female, actress, aged 24, with chancre on lip. She made-up for the stage in the same room with another actress, who was found afterwards to be syphilitic. The medium of contagion was supposed to be the rouge-pot.

Case 6. Female, aged 18, contracted a chancre of the lip by kissing. There was eruption of the skin and enlargement of the glands.

Case 7. Female, aged 23, with chancre of lip. Infected by her syphilitic husband.

Case 8. Male, aged 42, chancre on upper lip. Drinking whisky from bottle after some friends, one of whom was syphilitic, was the mode of contagion.

Case 9. Male, aged 28; mucous patches at tip and side of tongue, and also covering inside of lower lip. He had been married six weeks, although he knew he was suffering from syphilis. He was forbidden to kiss his wife. Three weeks later his wife was found to be infected with a chancre on the upper portion of the tongue. She suffered from an extensive tubercular eruption; large ulcerated spots covered her back and breast; it was a case of malignant syphilis.

Case 10. Female, married, aged 28, chancre of upper lip. Contracted through kissing her syphilitic husband.

Case 11. Male, married, aged 30; contracted chancre from prostitute. Inoculated his wife with chancre of the lip.

Case 12. Female, cook, aged 20; caught sore on lip by kissing her lover, who was suffering from mucous patches of the lips and tongue. On account of its early diagnosis, the disease was not transmitted to the young children of the family.

Considering how readily the mucous patch of the mouth will inoculate a chancre, it seems strange that there are not more cases reported of the primary lesion occuring in this locality.

Physician (with ear to patient's chest): "There is a curious swelling over the region of the heart, sir, which must be reduced at once."

Patient (anxiously): "That swelling is my pocket-book, doctor. Please don't reduce it too much."—*Our Dumb Animals.*

CONCERNING TYPHOID FEVER.

Dr. Victor C. Vaughan (*Medical News*) says:

There may be such a thing as typho-malarial fever, but no man has ever, as yet, demonstrated its existence. To-day there are three theories concerning the causation of typhoid fever:

1. The German theory, that typhoid is caused by a certain germ; that it is a specific disease, the same as smallpox. One of the definite characteristics of the germ is that it will grow upon a potato, forming an invisible growth. The Koch-Eberth germ is the only germ capable of causing typhoid fever.

2. Another theory we may designate as the French theory, which is that the cause is a modified form of the bacillus *coli communis*, which sometimes acquires extraordinary virulence. If the French theory is correct, the pollution of water with any fæcal matter may cause typhoid fever. If the German theory is correct, it would be perfectly safe to drink all the fæcal matter you wish, provided it comes from healthy persons.

3. There is another theory, and that is that typhoid fever may be caused by any one of a number of germs, which are closely related to one another, but which are not connected either morphologically or physiologically, and consequently we cannot expect the symptoms to be the same in the cases.

For the last twelve or fifteen years I have, on account of certain official positions, investigated every outbreak of typhoid in the State of Michigan, and for the last six or seven years I have accompanied these with a bacteriological examination, both of the drinking-water supply and, for the last two or three years, of the spleens of the persons dead from typhoid fever. While I have seen thousands of cases of typhoid fever, I have yet to see a case of *typical* typhoid fever, as described in the text books, where the temperature is graded day after day. Of course, in many of these cases the temperature is interrupted by the treatment. Further I have never, as yet, found in the drinking-water, or in the spleen of a person dead from typhoid fever, a germ identical with the supposed specific germ. Occasionally I have found germs which form an invisible growth on potato, but they have been different from the Eberth germ. In a recent outbreak at Ironbrook I inoculated beef-tea, and after twenty-four hours injected it into animals. The germs was then found in the spleen, kidney, and liver. I directed sent to me the spleens of all persons dead from typhoid fever, and in these, which were quite a number, I found the same germs as in water. I think this pretty positive proof that the germ caused the disease. I think we have a group of causes, just as in the vegetable world we have a number of plants which produce poison, varying in virulence according to the conditions in which the plant grows. Tobacco grown upon different kinds of soil will show changes. Why not germs, which pass through a number of generations in a short time? A woman living in the country does not go from home but dies from typhoid fever. A post-mortem is held, and it is found to be true typhoid fever. Some contend that such cases are caused by infection carried by a tramp with walking typhoid fever, who, visiting the various watering places, infects the neighborhood. There are annually 50,000 deaths in this country of typhoid fever, and 500,000 sick with it. This shows that the germs must be widely distributed. I am sure that healthy individuals aid in distributing the disease.

The Testicle in Hereditary Syphilis.

1. The testicles may be affected so slightly in congenital syphilis that it needs the microscope to detect the malady. 2. In a small percentage of cases of congenital syphilis, the lesions of the testicle are such that they can be detected by physical examination. It appears, as a rule, in the first two or three years of life. 3. The globe is chiefly affected; and there is no affection of the prostate, vas, or vesiculæ. 4. The disease is frequently bilateral. 5. Hydrocele is fairly frequent, the swelling is painless, and may be nodular. 6. The enlargement great. The microscopical appearances are those of inflammation of the fibrous tissue framework of the organ, leading to fibrosis, and, if the disease is not checked, to atrophy of the organ. Gummata are rare.—Carpenter.

A COMMITTEE ON DRINK.

In all the more highly civilized countries that venerable puzzle, the drink problem, is forcing itself upon the attention of the authorities in government and science. Science, hitherto, has meddled with it comparatively little. The chief fighters against drink in our line have been the temperance enthusiasts, whose appreciation of the evils of it have been sufficiently vivid, and whose zeal has been intense, but not always according to knowledge. Legislation on the subject has aimed chiefly to keep drink away from men, but its results, where it has had a fair trial, as in Iowa or Maine, have not been altogether satisfactory. In England just now measures are under consideration which aim not to keep drink from drunkards, but to keep drunkards from drink. The submission of plans with such an object marks in itself a considerable progress of opinion in a country where the right to be peaceably drunk has always been considered one of the natural privileges of citizenship. A committee of eminent physicians and persons skilled in dealing with animals, appointed by the Salisbury government, has submitted to Parliament a report recommending that power be given to magistrates to commit drunkards to reformatories for a period not exceeding two years. The committee found that many drunkards were cured in reformatories, and that many more of them would be cured if they could be kept sufficiently long under restraint and treatment. It proposes that drunkards who voluntarily enter such retreats should be kept until discharged; that the semi-criminal habitual drunkards, with whom the police have to deal, should receive intermediate sentences of not less than one year, and that magistrates should be empowered to commit ordinary inebriates on the petition of relatives, or in their own descetion. It also proposes to empower the police to arrest without a warrant all persons found drunk in public, and to lock them up for trial. The report, as will be seen, practically denies the right of the contemporary Briton to be a drunkard, or even to be publicly tipsy. If it is adopted, and its recommendations enforced, it would seem likely to make intoxication much less satisfactory, and possibly less popular, in Great Britain than it is at present.

In France, too, the same subject is under serious discussion by experts. M. Zola, after his recent visit to London, expressed himself as profoundly shocked by the consumption of intoxicants by English ladies. French ladies probably drink less, but that French men at least are injudicious in their potations appears very clearly from the published conclusions of M. Charles Fere, the well-known Parisian authority on nervous diseases, who notices an immense increase in France of the maladies which are his special charge, and thinks it due "to the increase in beer-drinking, absinthe-drinking, and bars." Dr. Fere says that twenty-three years ago there was hardly such a thing as a bar in all Paris, but now "one sees them all over the town, and always crowded." He attributes their spread largely to the growth of the passion, now said to be well-nigh universal in Paris, of betting on race-horses. Bars and low eating-houses, where alcoholic drink is sold with or without food, are the centres of resort, he finds, for those small tradesmen, cabmen, cooks, artisans, and so on, who want to get tips and enter into sporting transactions. To the account of this sort of drinking Dr. Fere lays the increased development of nervous and mental diseases in infants—an increase which he thinks so serious in amount and so menacing in its portents that he declares that alcoholic drinks are now the great enemy of the races which do not abstain from them, and that if the Aryans go on tippling as they do, they must finally give way to Jews, Arabs, and Chinese.

This is a serious view to take of contemporary drink, and it carries the more weight because it expresses the opinion not of a lay enthusiaist, but of a scientific specialist.

The popular impression is that temperance in drink is advancing in this country, but it is reassuring to know that the whole subject has attracted the attention of a body of men who would seem to be exceptionally well fitted to deal with it in all its respects. The "Sociological Group" has interested itself in the drink problem. The Group began five years ago with fifteen members, including Bishop Potter, T. T. Munger, Seth Low, Richard T. Ely, Charles A. Briggs, Washington Gladden, Edward J. Phelps, and Charles Dudley Warner. Its purpose is the study of modern social questions. At a meeting last spring it voted to form a committee of fifty to investigate the liquor problem, and to that end appointed a committee from its own body to nominate the fifty members. This has been done, and October 20th was the day set for the larger committee to meet, at the United Charities Buildings in New York, for organization and reports.

Here is a committee from the labors of which it would seem that results of real importance might be looked for. The Group proposed that its committee should consider its problem in its physiological, its ethical, and its legislative aspects. The committee includes eminent experts, equal to the consideration of all these aspects, and others besides. Besides the members of the Group it includes such divines as Cardinal Gibbons, Archbishop Ireland, Rabbi Gottheil, Bishop Gailor, Bishop E. G. Andrews, Dr. W. R. Huntington, Dr. W. S. Rainsford, and others not less distinguished. Among its scientists are Dr. J. S. Billings, Professors Bowditch of Harvard, and Furnam and Chittenden of Yale, and Dr. Weir Mitchell. Among its educators are President Eliot, President D. C. Gilman, and General F. A. Walker. Among men of affairs and employers of labor it has Frank Thompson, Marshall Field, and Cornelius Vanderbilt. Altogether it is a remarkable committee, fit in weight and intelligence to cope with a titanic problem. At the meeting last month the sub-committee on the ethical aspects of drink was to have made a report. The report of the committee on physiological aspects had already come in before that meeting, and maps out an exhaustive inquiry, including investigation of the effects of normal and of abnormal constituents of alcoholic drinks, and of combinations of the two. It proposes physiological experiments, which, it seems, will cost some $30,000, but if such a committee is really in earnest they will not be daunted by considerations of expense.

The American public is very generally interested in the drink problem, and wants the surest and latest information about it. It will rejoice to know that such a body of men as the Sociological Group's Committee is sounding the depths of the subject, and will look for important results from its labors. It will wish to know the committee's opinion of the patent cures for alcoholism that so greatly abounds just now, and what conclusion it reaches as to prohibition, local option, and the Guttenburg plan. It will also consider with especial attention the views of the committee on the broad and much-mooted questions whether alcohol is a poison which may be tolerated in moderate doses, or a useful servant of man when not abused.

Is alcohol good or bad for civilized man? That, after all, is the query that lies at the centre of the liquor problem. The doctors disagree about it. What will this committee say?

NARCOLEPSY.

Sleep is a function which though in itself is very wonderful, is yet so familiar to us that its phenomena seldom excite more than an emphemeral interest. It is only when it supervenes under unwonted circumstances that interest is stimulated, and that one is tempted to inquire further into its pathology. The capacity for sleep differs considerably as between different individuals. While some fortunate persons can wander off into dreamland at a moment's notice, in train or tram, or in the intervals of conversation, others are fain to woo the fickle goddess who shows herself coy and hard to please even under the most favorable conditions. In both cases, however, sleep, when it does come, is what we are accustomed to look upon as normal physiological repose. It is quite otherwise when it comes on with the suddenness and inopportuness of a sneeze. In some cases the resemblance with epileptic coma is so close that a well-known authority used to remark that the sleep of certain patients resembles a mild epileptic attack. Generally speaking, sleep is preceded by sequential prodromal indications, such as heaviness of the supra-orbital region, constriction on a level with the temples, a feeling of vacuum in the fore-diagnosis and the question of operation are cited. The author concludes that the danger of recurrence and the presence of a tumor are not in themselves sufficient grounds for operation. Two facts however seem settled: 1. when an operation is to be done, the earlier it is done the better the chance for recovery. 2. The character of the attack and consequent condition of the patient, and not the number of hours or days of illness, should form the basis of decision as to the proper time for operation. The author does not believe that the appendix should be removed if the adhesions are such that the attempt to release them will add to the gravity of the operation. In regard to the incision, he says that where there is a tumor this may be taken for a guide; in the absence of tumor the best site is in the right semilunaris. He advocates the Trendelenberg posture in operating. The stump of the appendix should be carefully covered with peritoneum after ligation. If this is not done, the removal of the appendix leaves the patient in great danger of perforation.

Dr. T. D. Dunn reports a case of "Pelosis Rheumatica in a Bleeder." The case reported supports the view that the disease is a special affection of which the arthritis is a manifestation analogus to that which occurs in hæmophilia.

The remaining paper in this issue is by Dr. George J. Engleman entitled "Recent Investigations in Faradic Electricity."

THE TRI-STATE MEDICAL JOURNAL

for December. Dr. F. Byron Robinson contributes an interesting paper on

Axial Rotation of Tumors and Viscera; Twisting of Pedicles.

The ætiology of axial rotation is imperfectly known, and the author, after reviewing the opinions of various authorities, suggests that visceral rhythm is the cause, viz: breathing, expansion and contraction of the digestive tract, the rhythm of the liver and spleen, and the filling and emptying of the bladder and uterus. Adhesions prevent rotation. The tumor rotates toward the middle line nearly always. In regard to the rotation of viscera, the author has found the cæcum rotated on itself in autopsies but the rotation did not affect the fæcal current. In experiments on dogs he tried to produce axial rotation of the sigmoid flexure—volvulus—but it always unwound itself and he never could retain the volvulus even by suturing it. The author states that however black cysts with twisted pedicles appear, they never show gangrenous tissue unless they have been tapped. In the diagnosis one of the first points is the previous existence of a tumor. The next matter is that the abdomen slowly or rapidly enlarges. The onset of the actual rotation may be sudden abdominal pain, fainting, pallor or nausea. If the woman be pregnant and also has a tumor, then torsion may be considered.

The treatment of axial rotation is abdominal section promptly applied. It is peculiar that most of the tumors that have been twisted on their axis till they have been twisted off their pedicles have been dermoids.

A Plea for the Appropriation of Criminals, Condemned to Capital Punishment, to the Experimental Physiologist,

is the title of a most remarkable paper by Dr. J. S. Pyle. The author thinks that a great advance would be made in medical science, and especially in brain surgery, if experimentation were allowed on condemned criminals. Various portions of the brain could be stimulated and the different centers of motion and thought more accurately localized.

"To secure co-operation and carry out the experiment successfully the condemned would be instructed with the nature of the work, assured that no torture would be instituted; that the preparation of removing a piece of the skull and cerebral membranes should take place under the influence of an anæsthetic; and, while he should be allowed to regain consciousness to be interrogated, that no pain would be occasioned thereby; lastly, that his death should occur when in a profound sleep. This would, it would seem, remove the appearance of revenge and barbarity and convert such an occasion into one of real utility both socially and scientifically."

"The State would be doing its duty to take up this matter and make the new form of execution a recognized law. In this, crime would be punished, society protected and loss compensated. The outcome would be a very important one to criminal law, as the manner of arriving at the grounds for requiring the death punishment would be entirely changed and it is believed highly satisfactory. Death would be enforced as an obligatory measure. The criminal, instead of dying the death of a felon, would redress his offense to the State and society by offering himself as a public benefactor. He would stand to be tried as to whether he should pay society for the loss it had sustained and the State the expense of a fair and impartial trial." A building should be specially erected for the purpose and equiped with every form of physiological apparatus required. The executions should be under the charge of an expert body of physiologists and results of the experiments should be published in a report at the conclusion of each execution.

[The author believes that the chief opposition to his scheme will come from morbid sentimentalists. The editor of this department will probably be classed as such by the author, but it would seem to him better to abolish entirely the death penalty than to add to its horrors those of the visvisection table.—ED.]

Dr. C. E. Ruth reports a case of

Excision of the Cæcum; Approximation of the End of the Ileum to the End of the Colon with the Murphy Button,

in a patient five and one-half years old. The author states that this is the first excision to his knowledge, in one so young, for intestinal obstruction due to neoplasm; and the first in which the Murphy button has been used to make an end to end junction of the ileum to colon with excision of the cæcum, in the human subject. The patient made a good recovery. The author presents the following facts in favor of the Murphy button:

1st. It furnishes the strongest junction known.

2nd. We do not need to wait five days to get strong union; it is immediately obtained with proper approximation of the segments.

3rd. In urgent cases nourishment can be commenced at once, which would be scarcely thought of in connection with any suture or plate device.

4th. No foreign body is left permanently in the walls or caliber of the gut to cause subsequent trouble.

5th. In anastomoses between the gall bladder and duodenum; in the formation of biliary, gastric, or fæcal fistulæ, externally, and by Bacon's method of treating non-malignant strictures of the rectum, it leaves nothing to be desired.

6th. If circular enterorrhaphys, *undoubtedly the ideal approximations*, are ever justifiable, it is by this means, as it minimizes the objections urged against the operation, viz.,—weakness at the mesenteric attachment and subsequent contraction.

7th. The union can be made in less time than by any other means, thereby greatly lessening the primary mortality.

The article is illustrated by two wood cuts showing the removed cæcum.

Dr. W. W. Grant discusses the "Indications for and Value of the Uterine Curette," advocating the use of the dull tubular spoon-curette with full antiseptic precautions.

Dr. John I. Skelly, in an article on "The Country Doctor," pays an eloquent tribute to the practitioner living out of the cities. He points out that the country doctor is the father of ovariotomy and of many other operations and also that he has added much to our knowledge of materia medica.

The Tri-State Medical Journal is a newcomer among the ranks of medical magazines. It has our hearty good wishes for success.

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

THERAPEUTICS.

Modern Pathology and the Pathology of Nervous Diseases, with some Therapeutical Deductions and Experiments with Organic Extracts.

Charles L. Danna, A. M., M. D. (*Bost. Med. and Surg. Jour.*): The author sums up as follows:

1. The term inflammation has to be applied more carefully and with restrictions to nervous diseases. Many forms or cases of meningitis and myelitis are toxæmias or processes secondary to mechanical injury. There cannot be inflammation without specific cause. 2. In the organic neuroses of degenerative type there is a toxine of extrinsic or intrinsic origin, which is negatively chemotactic. The body cells and proteids cannot defend the special parenchyma against it. The degenerations, including muscular atrophies and primary sclerosis, are of toxic origin. There is a poison at work which it should be the effort of neurological science to antagonize and combat. 3. In the chronic neuroses of functional origin, so called, such as paralysis agitans, chorea, epilepsy, and Basedow's disease, there is a toxic factor which is of fundamental importance. This may be due to defective gland action, as in Basedow's disease and in myxœdema, or to humoral poisons of other origin. Many neuroses are really glandular or nutritive or infectious diseases. 4. Another element of equal importance in the etiology of the neuroses is an inborn or acquired lack of resistance to injurious agents, whether engendered within or introduced from without. This diminished power is in some instances produced by strong emotions and shocks, and the nerve-centres become susceptible to the action of poisons which continue and keep up the disease. Hence in treating the chronic neuroses two kinds of measures are to be employed: first, those which increase the strength and resisting powers of the organism; second, those which are of antitoxic or specific character. There are probably specific cures for many diseases which we now regard as hopeless. 5. The toxic origin of myxœdema has been established, and made probable in exophthalmic goitre, paralysis agitans, and chorea, and the importance of a toxic element has been shown in epilepsy. 6. By the term toxine is meant the product of defective metabolism, due either to defective gland action, microbic growth, or the extrinsic vegetable and mineral poisons.

Effect of Pilocarpine in Changing the Color of the Hair.

D. Webster Prentiss (*Epitome of Medic.*, 1893): Having used pilocarpine with great success in a case of uræmia, Dr. Prentiss was much interested by its effect on the patient's hair. The drug was administered by the hypodermatic method in doses of one centigramme, and the total amount injected (in two or three days) was forty centigrammes. The hair, which previous to this time had been a light brown, began rapidly to change its color to dark brown, and later became black. It also became coarser and thicker. These changes occurred not only in the hair of the head, but also in that of the other parts of the body. The author states that two similar cases though less marked—have been recorded; and speaks of the occasional effect of pilocarpine in promoting the growth of hair to a marked extent.

MEDICINE.

The Relation of the Patellar-Tendon Reflex to some of the ocular Reflexes Found in General Paralysis of the Insane.

Dr. Charles A. Oliver, presents the following formulation.

1. In some of the cases in the second stage of the disease, especially where the patellar-tendon reflexes were unequally exaggerated, there appeared to be an irregular and unequal spastic ennervation of the two irides, causing irregularities in pin-point pupil forms.

2. In a few cases, especially in the third stage of the disorder, where the patellar-tendon reflexes were unequally diminished, the pupil-size though small and its shape though somewhat irregular, seemed to be but little acted upon by any powerful mydriatic.

3. In many cases, especially in comparatively young subjects in the third stage of the disease where the patellar-tendon reflexes were unequally diminished there appeared to be an unequal paralytic ennervation of the two irides; the pupillary dilatation manifesting itself at times, though not as a rule, in the eye with the greater amount of objective optic-head degeneration and retinal change.

4. In a few cases (especially in men beyond middle life) in the third stage of the disorder, where the patellar reflex were markedly diminished and where the ataxias were quite pronounced, there were marked temporary assymetries of pupillary form, one often being quite small and irregular for several examination, whilst its fellow was large and ovoid or oval.

5. In quite a number of cases, especially in the advanced stages of the disease (although seen in a number of cases in their earliest stages) where the patellar-tendon reflexes were unequally exaggerated or diminished, there was a failure of the irides to respond to even major degrees of light stimulus; this being true not only for those subjects exhibiting a true spastic myosis but more especially shown in those instances where with partial dilatation of the pupil, mydriatics failed to act.

6. In many instances, especially in the older cases where the patellar-tendon reflexes were, as a rule, unequally diminished or even lost, there was not only failure of iris-response to the strongest light stimulus carefully thrown upon the retina, but where obtainable, the irides seemed to fail to react to the various coarse and rough subjective and objective procedures necessary to be used in order to evolve both separated and associated efforts for accommodation and associated efforts for convergence.

7. In some instances, where ciliary muscle innervation could be satisfactorily obtained, both the spastic excitation and the paralytic enervation at times found by subjective reading tests and objective study with the retinoscope, seemed to be in direct ratio with the patellar-tendon reflexes as the iridic changes.

8. In quite a number of cases where there was marked inequality of the pupils with more or less want of reaction of the irides to light stimulus the patellar-tendon reflex on the side of the larger pupil seemed to be the one the more greatly diminished.

9. In a number of instances, especially during the very earliest stages of the disease, where the patellar-tendon reflexes were beginning to lessen to unequal degrees, there often appeared momentary secondary ataxic dilatation of the pupil during exposure to strong light stimulation.

10. In many cases, especially during the second stage of the disorder, when the patellar-tendon reflexes began to become irregular and inconstant, pupillary inequalities as expressive of unequal iris innervation and action, becomes more and more constant.—*Bost. Med. and Surg. Jour.*

Subcutaneous Injections of Salol in the Treatment of Tuberculosis.

According to the *Jour. de Med. de Paris*, Grasset has obtained very satisfactory results in the treatment of tuberculosis by the subcutaneous injection of salol. The advantages claimed are the decrease in the fever and night-sweats, with a simultaneous moderation of the cough and the number of bacilli. He employs salol with oil in the following mixture:

℞	Sweet oil	℥i.
	Salol	ʒiiss.

This is given with a syringe which contains five drachms. The injection is made underneath the skin, and Grasset asserts that within twenty minutes after its use salicylic acid may be obtained from the urine. The injections should be given in those portions of the body where the subcutaneous tissues are loose, as there is always slight induration produced, which, however, shortly passes away.

Observations on the Nature and Treatment of Angina Pectoris.

After an interesting discussion of the subject heading this article, Dr. J. Burney Yeo (*Practitioner*), reaches the following conclusions:

The true indications for treatment in angina pectoris may be thus summarized:

1. To maintain or improve, when defective, the general nutrition; to avoid all strain, physical and emotional; and so to relieve cardiac feebleness and excessive effort.

2. To relieve dyspeptic conditions and flatulent or fæcal distention of the stomach and intestines.

3. To forbid the habitual comsumption of agents which may exercise a toxic action on the heart, such as tea, coffee, tobacco,

alcohol, etc., or that may introduce or develop toxines in the alimentary canal.

4. To avoid and remove all gouty and other bloody contaminations.

5. To give such tonic remedies as may improve the cardiac tone and lessen existing tendencies to cardio-vascular degeneration.

6. To relieve the paroxysmal attacks by sedatives and stimulants.

The Treatment of Diabetes.

Dr. George Harley (*Br. Med. Journ.*) divides diabetes into the following varieties:

1. Hepatic diabetes—including the gouty variety.
2. Cerebral diabetes—including all cases of saccharine urine arising from nerve derangements.
3. Pancreatic diabetes—the most deadly form of the disease.
4. Hereditary diabetes—a form by no means uncommon, and one where both brothers and sisters may labor under the disease without either their maternal or paternal parent having been affected by diabetes, though more distant members of the family may have suffered from it.
5. Food diabetes—including all forms of accharine urine arising from the injestion of unwholesome substances.

Diabetes in a Baby.

MM. Duflocq and Dauchez report a curious case of death from diabetic coma of an infant of only eighteen months of age. When M. Dauchez first saw the child on January 6, 1893, he found it had been peevish and uncomfortable for only about a fortnight. It was very thin, weak, and of somewhat venous tint, and its discomforts were attributed by its parents to its teething, but to the doctor's ear the history of constipation sounded more serious. He gave it gentle purgatives and stimulants, and did not attribute any special importance to the mother's statement that it was drinking more than four pints of milk a day. Next day it was much weaker and more cyanotic, and the temperature had sunk to 96° F. More energetic measures were taken; it was wrapped in cotton wool and given punch, ammonium carbonate, and an enema of coffee. M. Duflocq was called in and found the baby comatose, with lost corneal reflex, quick breathing, and dry tongue. It did not feel the injections of ether, and in a few hours was dead, *i. e.* in less than thirty-six hours from the time when medical advice was first called in. The possibility of diabetic coma was recognized, and a little further search showed white powdery patches on the napkins and bed-linen, and an abundant amount of glucose by further chemical analysis. Dr. Conolly has recorded (*Med. Times and Gaz.*, July, 1874) a very similar case in a child of twenty-one months, with marked constipation ending in sudden coma; and instances have been given by Busch (*Ugeskrift for Læger*, March 24, 1875,) Hauner, and Rosebach (*Berl. klin. Woch.*, 1874), at a still earlier age. In the two last cases, however, death resulted from exhaustion rather than from coma. Hagenbach relates another case where death came on from pulmonary gangrene in a child of 6 months. There is one case to quote of recovery, in a little baby of Dr. Kitselle's, who was made out by his father within a fortnight of his birth to have diabetes, but who got over it by the time he was eight months old under careful treatment. (*Revue de Med.*)—*The Practitioner*.

Changes and Degenerations in Nævi.

Reboul (*Archiv. gen. de Med.*, May to October, 1893) says that nævi are tumors which are congenital in their origin, and on this account they are able to give rise to the formation of a variety of benign and malignant tumors. In a considerable number of cases they disappear spontaneously after birth, but in others they remain apparently stationary, and then they must be carefully watched so as to detect any changes which may take place in them. Whenever the least sign of extention, transformation, or malignant degeneration appears, it is necessary at once to adopt active measures, and to remove them freely. When they undergo malignant degeneration, especially of the melanotic variety, they must be regarded as infectious, and in the performance of operations for their removal, every precaution must be taken which will tend to prevent a local infection, which may become the point of commencement of a generalization of the growth, and hence lead to a fatal termination.

SURGERY.

Amputation for Diabetic Gangrene.

Mr. Pearce Gould amputated by Stephen Smith's method the right leg of a man, aged seventy-four, for gangrene of the three inner toes extending into the sole and slowly spreading; the arteries were atheromatous, the amount of urine passed per day was from seventy to eighty ounces, in which there were eight and three-quarter grains of sugar to the ounce. this amount, however, was reduced to six grains per ounce by restricted diet; the patient was edentulous, the skin was dry, and there was right cataract. After removing the limb Mr. Gould remarked that diabetes used to be considered a bar to operation, but more recent experience has shown that with asepsis operations may be safely performed, and often with great advantage on patient afflicted with this malady. He said the connection between diabetes and gangrene seemed to be threefold:

1. Senile gangrene from atheromatous arteries in a diabetic.
2. Acute spreading gangrene due to the diminished resistance of the tissues of diabetics to septic processes.
3. Gangrene from trophic changes.

In the first two forms amputation, he thought, should be remote from the disease, such as through or above the knee for gangrene of the toes; but in the third form he considered the operation may be performed just above the dead tissues.

He referred to a case in which he had amputated through the knee for spreading cellulitis and gangrene about the ankle in a diabetic patient who had made a good recovery, and from whose urine the sugar disappeared a weak after the operation.—*Med. Press and Circular.*

Duncan (J.) on the Surgical Treatment of Gall-Stones.

The conclusions which he draws from his experience in the surgical treatment of gallstones are,—

1. That when the stones lie in the gallbladder or lightly impacted in the cystic duct, cholecystotomy is a safe and esay operation.
2. That if the stone be impacted in the common duct, the gall-bladder is apt to be small, and such structures as the stomach and colon are prone to be adherent in awkward positions.
3. That in such cases it is safe to incise the duct and drain from the wound.
4. That considering the perfect health enjoyed by patients wite biliary fistula, there are few cases in which it would be justifiable to form a new route for the bile into the bowel.—*Edinburgh Mee. Jour.*

Antiseptic Varnish—Steresol.

Berlioz (*Jour. de Med. et de Chir Pratiques*) prepares an antiseptic varnish, which he terms steresol, by mixing the following ingredients:

℞ Purified shellac, 279 grammes;
Purified benzoin, entirely soluble in alcohol, 10 grammes,
Balsam of Tolu, 10 grammes;
Crystallized carbolic acid. 100 grammes;
Chinese essence of canella, 6 grammes;
Saccharine, 6 grammes;
Alcohol enough to make a litre.

This dressing is employed in regions which cannot be bandaged in the ordinary fashion.

The Toxic Effects of Gallic Acid.

In a recent issue of the *New Zealand Medical Journal*, Dr. Thomas W. Bell contributes an interesting clinical note as to the possible poisonous effects of this remedy, which is regarded as harmless in anything like moderate quantities. A man, aged thirty-two, with internal hemorrhoids, has a venous oozing with each passage of the bowels; various applications, including iron and cold water, had been used without any permanent benefit. One morning, just after an evacuation, he applied to the bleeding pile some ung. gallæ cum opio (B. P.). The piles were not painful and on their being replaced all discomfort ceased. After a little while he had for the first time in his life a slight attack of hay asthma, which was referred to the probable inhalation of some irritant dust. Three or four days later, after a second use of the ointment he had a similar asthmatic attack, followed by an urticaria lasting three or four hours, but no relation of cause and effect was thought to exist between the remedy and the subsequent outbreak. As the hemorrhage still persisted after each motion, Dr. Bell ordered a three-grain tannin suppository a short time before and after each movement of the bowels. The sequel is stated by Dr. Bell as follows: "In the afternoon, feeling quite well, he inserted a suppository. In about four minutes the symptoms of the asthma began to show. I watched the case throughout. First, there was pain and a tight feeling under the sternum, and a trouble in breathing; the breathing got quicker and labored, accompanied with wheezing and an occasional cough—until, in about half an hour from the time when the suppository was introduced, all he could do was to lie on the bed gasping and straining for breath, face flushed, hot, and perspiring, rales and rhonchi all over chest, and pain on coughing. With each cough a little pellet of mucus was expelled. This condition lasted for another half-hour, and then the pain and rapidity of breathing began to subside, but then the attack of urticaria commenced. Starting about the head and neck, it extended all over the body, and became especially marked about the feet. The irritation and itching was intense. Some of the wheals were from two to three inches in diameter. At the end of about four hours the cough had stopped, the breathing had returned to normal, but the irritation of the skin continued in a less degree till next morning. The patient had never had any asthma, or anything approaching it, before or since, nor have any of his relatives ever had anything of the kind. Nor has he ever had urticaria or any skin eruption whatever." The physician was at a loss to account for these phenomena except as the effects of the gallic acid. No such results followed the use of various other remedies. None of the standard text-books attribute toxic qualities to gallic acid, either in the line of vaso-motor disturbance or that of skin eruption. Some peculiar idiosyncrasy seems to have existed in this patient.—*Medical Record.*

GYNECOLOGY.

Influence of Mineral Baths in Normal and Pathological Menstruation.

Most balneologists regard menstruation as a contra-indication for baths, and these are discontinued during that period at every bath-cure. However, the investigations of Makaveyef show that in abnormal menstruation and in diseases of the sexual organs mineral baths should be continued, since they improve the general condition of the patient, diminish and shorten abundant menstruation, and augment a scanty flow. Artificial salt baths, according to the author, may be employed for the same purpose, their effect being similar. They are to be recommended to cause contraction of the womb and diminish the quantity of blood in it.—*Vratch*, Nos. 24 and 25, 1893.—*Universal Med. Jour.*

Williams on Papillomatous Tumors of the Ovaries.

The author groups together, as follows, the salient features of the two forms.

1. Most papillomatous cystomata are not developed within the broad ligament, the majority of intraligamentous papillomatous growths being of other than ovarian origin.
2. These growths are derived either from the Graafian follicle or germinal epithelium; their origin from the Wolffian body or from the tubal epithelium, while possible, has yet to be demonstrated.
3. As the origin of both the ciliated and non-ciliated papillomatous growths is identical, there is no justification for considering them as constituting two distinct classes of growths.
4. Polymorphism of the epithelium is not characteristic of ciliated papillomatous growths.
5. The formation of psammoma bodies is not pathognomonic of the ciliated papillomatous cystomata, for they occur in the superficial and non-ciliated varieties, and also in the normal ovary and tube, as well as in other parts of the body.
6. Superficial papillomata are of far more frequent occurrence than is generally supposed.
7. They are very closely related to the papillomatous cystomata, and are always derived from the germinal epithelium.
8. All varieties of papillomatous growths of the ovary have a marked tendency toward the formation of secondary growths. The majority of secondary growths are produced by mere extension of the growth by continuity of tissue, or by implantation of small particles of the tumor upon the peritoneum. In rare instances, true metastases may be formed.
9. The papillomatous tumors possess a marked tendency to become malignant, and even the anatomically-benign growths, in view of their tendency to the formation of secondary growths, are to be considered as clinically malignant.
10. The results of operations, even after the formation of secondary growths upon the peritoneum, are quite satisfactory.—*Johns Hopkins Hosp. Rep.*, vol. iii., 1893.

Suture After Laparotomy.

Howitz, of Copenhagen, at the recent Surgical Congress held at Gothenburg, discussed the comparative value of the methods and kinds of sutures which are used after laparotomy. According to him the abdominal hernia which occasionally occur after operation are dependent upon the manner in which the sutures are applied. Three factors determine the strength of the cicatrix: (1) The nature of the uniting surfaces; (2) the manner in which they are held together, and (3) the kind of suture used. As regards (1) the incision in the linea alba is not advantageous, since the conditions required for the formation of a sound scar are not present. In order to form a strong cicatrix the opposing surfaces of the incision must be fairly extensive and smooth, they should contain only a small amount of fat, and should be in apposition without much tension. In order to secure this condition of affairs the author advises that the incision should be made about two-thirds of an inch from the middle line, passing through the substance of the rectus muscle. As regards the method of suturing, he recommends the twisted suture, such as is used for harelip. In applying the suture a slightly curved needle is used, and only a small amount of peritoneum included in the suture. The sutures are made from silkworm gut. After the operation the patient is kept in bed for three or four weeks, so as to allow the scar to become firm.—*Sem. Med.; Brit. Med. Jour.*

Extra-Uterine Pregnancy.

Dr. G Haven, in *Bost. Med. and Surg. Jour.*, says: The following symptoms suggest ectopic pregnancy:

1. The absence of menstruation, or a flow coming at irregular intervals, and of uncertain duration.
2. Pain of a severe and spasmodic character, which may be permanent at first, then absent for some weeks, to return later with renewed vigor.
3. Vaginal discoloration—a symptom of some importance, yet often noticed in cases where some other form of pelvic tumor is present.
4. General signs of pregnancy, such as nausea, enlarged and tender breasts, increase in size of the papillæ, darkened aureolæ, milk in the breasts, *ballottement*, the presence of a tumor, irregular menstruation, and, possibly, gait.
5. The history of having had a child or miscarriage. This is important, as cases occuring in nulliparous women are rare.
6. Expulsion of decidua. This symptom is of great importance, although in the majority of cases we are not fortunate enough to have it present, the clot and shreds of tissue are thrown away before a microscopical examination can be made.
7. Increase in size of the uterus, with the fundus either pushed forward or to the right or left side.
8. Elongated, soft, and patulous cervix.
9. The appendages on one side containing a thin-walled and tender cyst. The fact, however, that a tumor is felt upon both sides should have no bearing upon the diagnosis, as one of the tumors may be due to extra-uterine pregnancy, and the other to some other form of tubal, ovarian or pelvic trouble.
10. Pulsation of vessels in neighborhood of cyst.
11. The rapid increase in the size of the tumor.
12. Presence of fetal heart sounds.
13. Presence of placental bruit.
14. Feeling the small parts of the child, either through the vagina or rectum, or by combined manipulation.

With diagnosis made, the right policy is to operate.

OBSTETRICS.

Helme (T. A.) on the Composition of the Fœtal Urine Secreted in Utero.

1. The fœtal kidneys secrete actively during intrauterine life.
2. The urine of the normal living fœtus contains urea.
3. The urine of the normal living fœtus contains kreatinin.
4. The fœtal renal excretion is a possible source of origin of the liquor amnii; this is shown by the presence of urea and kreatinin in both these fluids.
5. The presence of sulphates and phosphates in the liquor amnii, and their absence from the fœtal urine, would point to there being an additional source of origin of the liquor amnii.

The Dangers and Avoidance of Ergot in Obstetrics.

In the *Columbus Med. Jour.*, Crosslands has an article upon this subject, in which, after quoting his own experience and the instructions given by the standard text-books, he reaches these conclusions:

Ergot is extensively used to prevent an imaginary danger. In cases where its use seems most indicated, better results are obtained without than with them.

Its positive action blinds us to its possible dangers. The evil it does is often credited to other causes.

Administered, it is a potential force over which we have little or no control.

When the natural forces are insufficient, there are other means which are efficient, harmless, and controllable.

When all other means fail, forceps is the final resort for delivery through the natural passages.

ARMY AND NAVY.

U. S. ARMY, FROM NOVEMBER 26, 1893, TO DECEMBER 2, 1893.

First Lieutenant Alexander N. Stark, Assistant Surgeon, U. S. Army is relieved from duty at Fort Clark, Texas, and will report in person to the commanding officer, Fort Sam Houston, Texas for duty at that post.

Forty-seventh semi-annual meeting of the Northwestern Ohio Medical Association will be held at Toledo, Ohio, Thursday and Friday, Dec. 14 and 15, 1893.

Session to be held in Y. M. C. A. Rooms, Cor. of Oak and Summit Sts.

NEWS AND MISCELLANY.

Improved Service to Cincinnati & St. Louis.

The Baltimore & Ohio Southwestern Limited, leaving Market Street 11.26 A. M., and the fast Express, leaving at 9.58 P. M., and leaving 24th and Chestnut Streets 11,42 A. M. and 10.15 P. M., for Cincinnati and St. Louis, are now equipped with a complete Dining Car service, built expressly for these trains by the Pullman Company. Pullman Dining Cars are also attached to Royal Blue Line trains leaving Market Street 11.26 A. M., 7.22 P. M., and leaving 24th and Chestnut Streets 11.42 A. M., 1.35 and 7.38 P. M. daily for Baltimore and Washington.

Of Interest to Travelers.

The Baltimore and Ohio Railroad announces that they have placed on sale round trip tickets at reduced rates to the Winter Resorts in Florida and the South, and also to such points of interest as Luray, Natural Bridge and Gettysburg. This company has also arranged to place on sale excursion tickets to San Francisco and other points in California on account of the Mid-Winter Fair, at unusually low rates. Excursion tickets are now on sale to Baltimore and Washington via the famous Royal Blue Line.

With its vestibuled train service via Washington to Cincinnati, St. Louis and Chicago, the B. & O. is in the best of condition to handle western and southern travel. That the line is a popular one, is attested by the immense World's Fair business handled this summer.

Those contemplating a trip west or south this winter, should write to James Potter, Div. Pass. Agent, B. & O. R. R., 833 Chestnut St., Philadelphia, Pa., for rates and other information.

Reduced Rates for the Holidays.

In pursuance of its liberal policy, the Baltimore and Ohio Railroad Company announces that excursion tickets will be sold between all stations on its lines east of the Ohio River during the Christmas and New Year holidays at reduced rates. The tickets will be sold for all trains December 23, 24, 25, 30, 31 and January 1, and will be valid for the return journey on all trains until January 3 inclusive.

Through Cars to New Orleans.

Among the many important improvements in the Baltimore and Ohio Railroad train service is the addition of through pullman Sleeping Cars from New York to New Orleans, via Philadelphia, Baltimore, Washington, and the famous Shenandoah Valley route, passing through Roanoke, Knoxville, Chattanooga and Birmingham. The train leaves New York daily at 5.00 P. M.; Philadelphia, 12th and Market Sts., 7.22 P. M and 24th and Chestnut Sts. 7.38 P. M., reaching Roanoke at 7.50 A. M.; Knoxville, 3.52 P. M., and New Orleans, 12.45 P. M.

This train is very handsomely appointed, being vestibuted throughout, and has Dining Car service New York to Chattanooga. At Washington a Pullman Sleeping Car, which runs through to Memphis, is added to the train.

THE
MEDICAL AND SURGICAL
REPORTER.

No. 1920. PHILADELPHIA, DECEMBER 16, 1893. VOL. LXIX—No. 25

ORIGINAL ARTICLES.

GASTROSTOMY BY WITZEL'S METHOD FOR PRIMARY CANCER OF THE ŒSOPHAGUS.*

WILLIAM W. KEEN, M. D.,† PHILADELPHIA.

The patient, S. S., aged forty-eight, occupation puddler in rolling mills, was admitted to the Jefferson Hospital July 31, 1893, at the request of Dr. A. G. Miner, of Niles, Ohio. His father died of asthma, his mother of cancer of the breast. He has always had good health with the exception of an occasional brief attack of rheumatism. For the past thirteen months he has experienced trouble in swallowing; seven months ago he could swallow solid food without much discomfort, but now he can swallow nothing but liquids. He states that the constriction came on gradually and that he noticed from time to time the lessening of the calibre of his œsophagus. When he takes nourishment he feels first an impediment to the passage at a point corresponding to the sterno-clavicular articulation; then the food passes with comparative ease until it reaches a point which corresponds to half an inch above the lower end of the ensiform appendix. Here he says he can feel a distinct obstruction, and while the food is passing this point he experiences pain in the median line posteriorly, under the inferior angles of both scapulæ (more severe under the left), in the epigastric region, though slight, and in the precordial region. The pain is darting in character.

During the past four months he has had slight attacks of hematemesis. On July 27, 1893, he lost considerable blood, enough to make him faint, but he attributes this to the introduction of an œsophageal bougie. He has had gradually increasing emaciation, and has lost forty-nine pounds in the last thirteen months, his weight in June, 1892, being 168 pounds, and in July, 1893, 119 pounds. During the last ten weeks he has had œsophageal bougies passed twice a week. On the 31st of July I passed a No. 3 rectal bougie through the stricture.

He has never swallowed any corrosive fluids, and has had no traumatism. He does not indulge in alcoholic stimulants stronger than beer, and limits this to two or three glasses a day. He denies all history of syphilis. His appetite is impaired, tongue coated and bowels constipated. The urine is negative.

There is a resistance in passing the œsophageal bougie (circumference 4.2 centimetres) at ten and a half inches from the teeth, and at twelve inches the bougie would not pass.

Operation, August 2, 1893. An incision four inches long was made, beginning at the middle line and running to the left, a finger's breadth below the border of the ribs. The muscular fibres of the rectus were separated by the fingers and not divided. The liver was seen as soon as the peritoneal cavity was opened. Two fingers thrust in, however, very readily seized the stomach. This was brought forward and outside the wound, the margins being packed with gauze. A rubber tube, five inches in length (Size 25, Fr. catheter scale), was introduced into the stomach and infolded by two rows of Lembert sutures, after Witzel's method. The opening in the stomach was made toward the cardiac extremity and the tube lay parallel to the external wound, its external end emerging near the median line. Three stitches were now inserted into the walls of the stomach but not tied before

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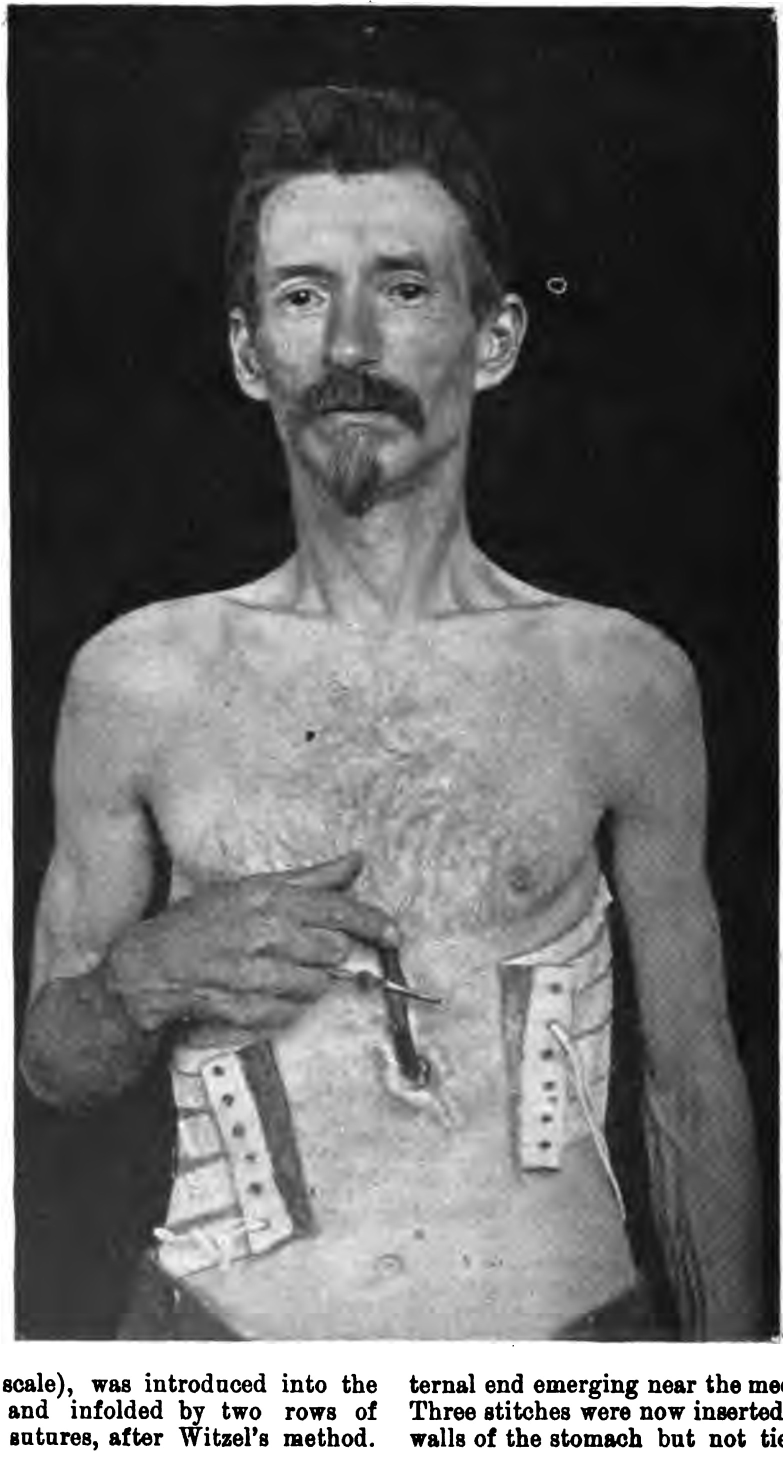
* Read before the Philadelphia Academy of Surgery.

†Professor of The Principles of Surgery and of Clinical Surgery, Jefferson Medical College.



it was returned to the abdomen, their needles being left threaded. As soon as the stomach was returned these needles were thrust through the abdominal wall and the stomach brought up to the margin of the opening. The tube was retained in place by a catgut stitch passed through the wall of the stomach and through a part of the wall of the tube so as not to open its calibre. About one inch of the tube was thrust into the stomach. The edges of the abdominal opening were now sutured by silkworm-gut and the ordinary dressing applied. A clip was placed on the tube to prevent the escape of the contents of the stomach.

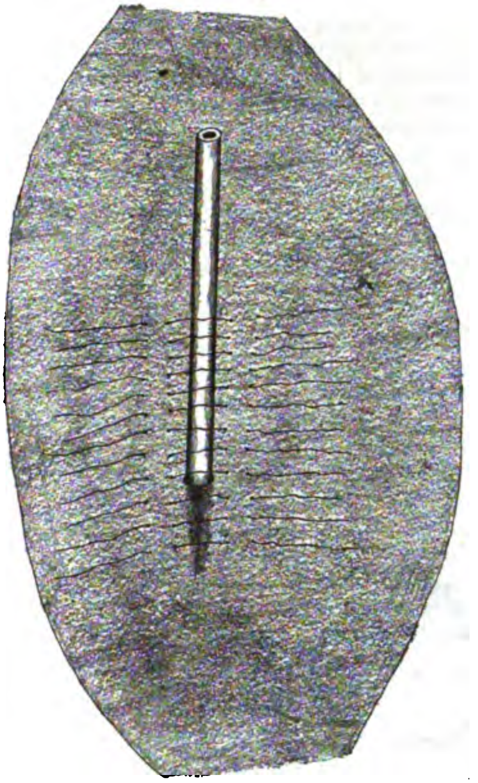


FIG. 2.—Witzel's method for Gastrostomy, showing application of sutures in wall of stomach embedding tube obliquely therein.

September 28, 1893. The patient made an excellent recovery, without incident, excepting in one respect. On the second day after the operation the dressing became twisted in his movements in bed, and the tube was pulled out of the stomach. In order to replace it I was obliged to cut three stitches in the external wound. When the tube had been replaced these stitches were re-inserted. Apparently, however, such adhesion had formed that no harm was done by this accident excepting to delay the closure of the wound.

By the middle of September he began to expectorate some bloody mucus, presumably coming from the ulceration of the carcinoma in the œsophagus. He has gained about four pounds in weight, however, since the operation. For some weeks he has been unable to swallow even a mouthful of water. What nutritive gain there is from feeding, I presume has been almost counteracted by the progress of the disease. Immediately after the operation he was fed for two days by rectal enemata. Then I began with small amounts of milk, poured into the stomach through the tube. This feeding has been gradually increased, until at the present time his daily food may be summarized about as follows: Milk, two quarts; beef, mutton and chicken broth, each about twenty ounces; and a dozen eggs. This is varied by substituting gruel, thin custard and other similar food. He is walking about with much comfort. The tube is held in place by a gauze dressing, which in turn is retained by rubber adhesive plaster on each side. This is laced through eyelet holes. (See Plate, Fig. 1). No escape of the gastric contents has taken place alongside of the tube.

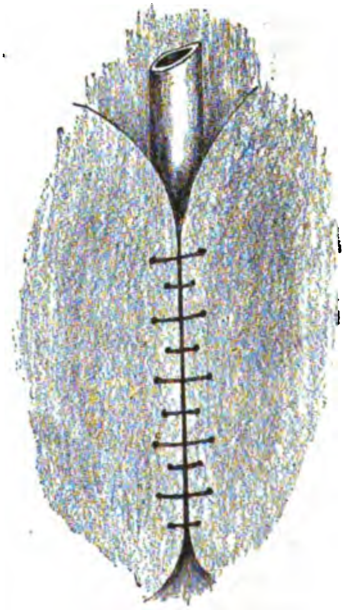


Fig. 3.—Sutures tied completely embedding tube for some distance.

November 1, 1893. The patient is still doing well three months after the operation. There is absolutely no leakage whatever.

Greig Smith states that the operation of gastrostomy was first proposed by Egebert, a Norwegian surgeon, in 1837, received its name from Sedillot, in 1846, but had a very unsatisfactory history and development until the time of Sidney Jones, of St. Thomas' Hospital, London, in 1874. Since then it has made rapid progress in favor in the profession, and a variety of different methods of its performance have been devised, until now its technique is presumably so satisfactory that but little improvement can be made upon it. The conditions which demand the operation are, of course, any cause which prevents the introduction of aliment into the stomach by the mouth, for instance, stricture of the œsophagus from any reason, whether by cancer, cicatricial constrictions from caustics, etc., occasionally from the pressure of extra-œsophageal growths, or from malignant disease in the mouth or pharynx. Whitehead[1] has reported a case in which gastrostomy was done on account of obstruction due to a diverticulum.

There are practically five methods by which gastrostomy is done.

1. The method originally proposed by by Egebert, and modified in its details by Fenger and Howse.[2] In this an abdominal incision is made parallel with the border of the ribs, and the stomach is attached by sutures to the abdominal wall. Two sutures are placed in the wall of the stomach in order later to identify the exact position for puncture (Bryant), and the stomach is not opened until the third or fourth day. This method has given rise to so much trouble, however, especially from leakage, that various devices have been employed for the purpose of preventing this annoyance, which, in consequence of the irritation from the escaping gastric juice, caused wide-spread eczema or even ulceration. Handford[3] notices, for instance, "a hernia like protrusion of the mucous membrane of the stomach from the fistulous opening, forming a red, mushroom-shaped, insensitive mass, nearly two inches in diameter. This was easily replaced, but led to constant leakage of the stomach contents." Moreover, it is very important to observe that in Whitehead's case, above alluded to, the post-mortem showed that the adhesions of the stomach to the abdominal wall had so loosened by traction that they were very slight indeed when the patient died, six months and a half after the operation. Hence, the importance of secure suturing of the stomach to the abdominal wall, as I believe I have obtained in my own case by suturing the stomach to the abdominal wall.

2. The method of Von Hacker.[1] This operator proposed to use the belly of the rectus muscle as a sphincter. In the first method of operating the fibres of this muscle are divided by a transverse incision. Von Hacker proposed to make a vertical incision and a blunt dissection of the belly of the muscle, hoping that the rectus fibres would thus act as a sphincter. Girard[2] modified this by crossing the fibres of the muscle so as to form a more efficient sphincter. Von Hacker himself has been obliged to use the Scheimpflug canula in order to prevent leakage.

3. The method of Hahn.[3] In this a return is made to the original transverse incision, but a second incision is made in the eighth intercostal space. The stomach is drawn through this space, and fastened there between the cartilages. In addition to the danger of possibly opening the chest, necrosis of the cartilages has taken place, although Hahn affirms that there is no danger either to the diaphragm or the pleura. He believed that the cartilages of the ribs acted like a sphincter or stopcock.

4. The method of Witzel.[4] In this method the abdominal cavity is opened, the stomach drawn out, and a moderate-sized rubber tube is inserted into the stomach toward the cardiac extremity, through as small an opening as will admit it. The gastric end is then buried for about two inches by two rows of ordinary Lembert, or Cushing right-angled sutures. The free end of the tube is then brought out through the abdominal wound; and is either fastened there, or possibly after a time may be removed and inserted as

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[1] Lancet, 1891, I, p. 11.

[2] Heath's Dict. of Surg., p. 590.

[3] Lancet, 1891, II, 988.

[1] Wein. Med. Woch., 1886, Vol. xxxvi, 1073-1110 and Wein. klin. Woch., 1890, 693.

[2] Corresp. bl. f. Schw. Aertze, 1888, No. 11.

[3] Centralbl. f. Chir., 1890, 193.

[4] Centralbl. f. Chir., 1891, 601.

needed. [I have thus tried to remove the tube temporarily in my patient but had to abandon it from the difficulty of its reintroduction.] The great advantage of this operation is the ureter-like, oblique entrance of the tube into the stomach; and, as is shown by the post-mortem examination in one of Meyer's cases,[1] the result is a nipple-like protuberance into the calibre of the stomach, which will prevent effectually the escape of any fluids.

This seems to me to be by far the best method yet devised, as it is simple, moderately rapid, and, above all, as in the present case as well as a few others in which the operation has been done, it is effectual in preventing any leakage.

I did not immediately begin feeding the patient through the tube, as I deemed it safer, the patient being in very fair physcal condition, to nourish him for a couple days by rectal enemata. I did, however, introduce an ounce of milk into the stomach the moment the tube was inserted, in order to make sure that perforation of the mucous membrane, as well as the muscular wall, had been effected. I think it likely that in another case, with the courage born of experience, I should be disposed to nourish the patient by small amounts through the tube immediately after the operation. I wished to try with this patient a method which has been used by others, the effect of his chewing meat which had been previously finely hashed, and then washing it into the stomach through the funnel. This gives the patient the satisfaction of mastication and of taste, and at the same time mixes the saliva with the food before its introduction into the stomach. Although not a man of especially sensitive nature, the idea of doing this seemed to disgust the patient so much that he was not willing to attempt it. The result, however, shows that he has received sufficient nourishment to gain somewhat in weight. Whether his constant hunger, in spite of the nourishment taken, is due to the want of satisfaction of his sense of taste, I do not know.

5. Frank[2] has reported still another method practiced in the clinic of Albert, in Vienna. After making the abdominal incision parallel with the costal cartilages, a narrow fold of the anterior wall of the stomach is drawn out of this wound. A second incision is next made through the skin, half an inch above the first and over the costal cartilages. After separating the skin from the underlying parts, the fold of the stomach wall is drawn out, first through the abdominal wound, then under the skin, and, finally, through the second opening, and is fixed there, the mucous membrane being stitched to the skin. Whether experience will show this to be more valuable and more easily done than the method of Witzel cannot yet be determined. It is said that no leakage occurs. Of course, as pointed out by the author, it would not be advisable in cicatricial stricture of the œsophagus, because the fistula could not easily be closed, should it be desired to do this at any time.

It is interesting to note that Zweifel,[1] of Leipzig, has used the same process as Witzel in making an artificial urethra. This idea was suggested by Witzel in his paper. In a case of carcinoma of the urethra in a woman, Zweifel extirpated the entire urethra and part of the bladder, closed the latter viscus, and then by a supra-pubic cystotomy made an artificial urethra after Witzel's method.

The mortality of the operation was last collectively investigated by the late Samuel W. Gross.[2] At that time Gross collected 207 gastrostomies, with sixty-one deaths, a mortality of 29.47 per cent., with a prolongation of life, on an average, at the date of the last reports, of eighty-three days.

Comparing gastrostomy with other procedures, there were thirty-two cases of œsophagostomy, with nineteen deaths; a mortality of 59.37, and a mean duration of life of fifty days. Nineteen internal œsophagotomies, with six deaths, or a mortality of 31.57, and an average prolongation of life of 256 days. Five combined œsophagotomies have resulted in two deaths, a mortality of 40 per cent., and a mean duration of life of 168 days. Five œsophagectomies gave three deaths, a mortality of 60 per cent., and a mean duration of life of fifty days. Three retrograde divulsions all resulted in recovery, with a mean duration of life of twenty-two days.

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[1] Annals of Surgery, 1893, Vol, xvii, 594.

[2] Wien. klin. Woch., 1893, No. 15.

[1] Centralbl., f. Chir. 1893, 785.

[2] Trans. of the Amer. Surg. Assoc., II, 1885.

In the case of Handford, already alluded to, some very interesting physiological experiments were made. He introduced a small rubber tube attached to a female catheter into the stomach, and connecting it with a Marey's registering tambour and clock work revolving drum, he found the respiratory and cardiac curves well marked, but absolute absence of any peristalsis. This he accounted for by the adhesion of the stomach to the abdominal wall. Yet digestion was efficiently performed, probably due to the replacement of this motion by the movement produced by the heart and diaphragm. He observes also that "the rapid introduction of large quantities of food into the stomach, the absence of pleasure in eating and the normal perception of flavors are not incompatible with very perfect digestion and active nutrition." Fine division of the food determined its rapid and easy digestion. Lactic acid was found as early as half an hour after eating. Hydrochloric acid was absent until as late as two hours after the meal.

COMMUNICATIONS.

TREATMENT OF FRACTURE OF THE LEG.*

J. T. BERGHOFF, M. D., St. Joseph, Missouri.

It has been my fortune for the last twenty years to be called to treat extra severe cases of fracture of the leg. Among them six fractures of the femur which had been treated by other surgeons, but the deformity and shortening were so great that something had to be done to save the patients from being crippled for the balance of their lives. The femur being firmly united, the average shortening is from two to three and one-half inches. The patient was thoroughly anæsthetized, the femur refractured, the fragments properly adjusted, put in my apparatus, and no shortening or deformity could be detected. One particular case I met three years afterwards accidentally, not knowing the patient. He said to me, "Doctor, do you not know me?" I answered, No. "Do you not remember you broke my thigh over; my name is K—. Feel my thigh." Not the slightest thickening at the seat of the fracture could be detected.

In 1892, I was the health officer of St. Joseph. My attention was called to a case, a man 56 years of age, who had been sitting in a rocking chair for 18 days with fracture of his right thigh in the middle third, without ever having been set or dressed in any form. I called on our mayor, Mr. William Shepherd, to go with me to see that case. When we arrived the mayor said to me, "you never will save that leg." I took him to the hospital. The swelling from the toes to the abdomen was so enormous that the fracture could not be felt. By placing the limb in my apparatus for one week, I had the swelling so far reduced as to be able to feel how and where the point of fracture was. The upper fragment had overridden the lower, the shortening being three and a half inches. This was the twenty-sixth day after the accident. The patient being anæsthetized, the bone was properly adjusted and kept in an immobile condition; the leg had to be redressed four times, as the swelling could not be reduced completely. On the forty-ninth day, that is from the day the limb was set, I removed all dressings, and no shortening or deformity could be detected. I applied a silicate potassa bandage. Next day on my way to the hospital I met the patient six blocks away from the hospital on his way home. I tried to persuade him to go back to the hospital as it could not be expected that the bone was solid, but he refused to go back, saying he felt all right.

I have treated compound comminuted fractures of the leg with this apparatus, one case especially that had been under treatment for ten weeks by two other surgeons, when the case became so desperate that they had to give it up. No union of tibia or fibula was found. The wound was covered with exudations, and erysipelas extended from the toes to the abdomen. The swelling of the thigh near the abdomen measured 32 inches, at the fracture of the leg, middle third, 24 inches, at the ankle 16 inches. The patient had septic fever. Temperature was 104½°. Patient had diarrhœa, etc. Under the common treatment the patient could not have survived one week. By placing the patient in my apparatus in an immovable condition and applying the proper remedies, both internally and externally, all went on well. In seven weeks the patient was able to be up and about. No shortening or deformity occurred.

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* Read before the Missouri Valley Medical Association, October, 1893.

I have treated seven cases of compound dislocation of the ankle joint, with fracture of the fibula about five to six inches above the ankle. One of them was also a compound fracture of the tibia, middle third. One of these cases had been treated 30 days by another surgeon, and the dislocation reduced every day for 30 days. The case became so desperate that I was sent for to amputate the leg. The discharge of pus amounted to one-half gallon in 24 hours. The patient had hectic fever, diarrhœa, septicæmia, and lost in 30 days, 60 pounds of weight. Amputation under such conditions was not to be thought of, the whole leg being a suppurating mass. I told the patient to let me treat him for one week so as to endeavor to improve his general condition, and that if the limb could not be saved, I would then amputate it. I placed the patient in my apparatus, adjusted the dislocation and fracture of the fibula, and in a week I had reduced the discharge of pus to about five ounces. Diarrhœa ceased, and appetite improved. In eight weeks the patient was out, but the astragalus had become partly necrosed and was afterwards removed, but leaving the patient with a good servicable foot. These cases had been treated by others as mentioned above. The six other compound dislocations which I have treated from the first all recovered with good joints, no separation ever having occurred. These are the worst cases I have had to deal with. Simple fractures I will not mention.

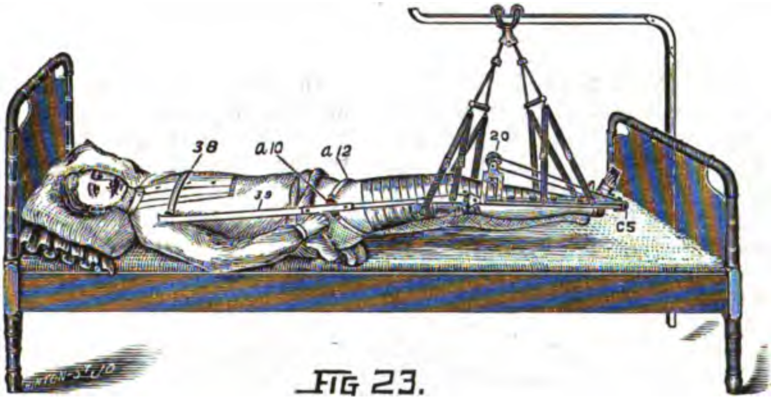

FIG 23.

In treating fractures of the leg, the leg should never rest on the bedding, but should be suspended even if only two inches above the bedding. I care not how well the surgeon may coaptate the broken bone, and protect the same with splints and bandages or plaster-of-Paris, if the limb rests on the bedding, by each movement of the body of the patient the fracture is bound to move. The process of repair is exactly the same as in soft tissues in bone. Why do we have union by first intention? Because we coaptate the wound exactly and keep it so. The wound heals sometimes in three days, at the farthest a week. But to put the broken limb in an immovable condition and keep it so without great suffering to the patient, the profession has not been able to do to the present time.

This universal apparatus or splint is an outgrowth of patient study for 20 years, more particularly the last ten years.

I will now describe my apparatus. The suspension device consists of a half inch steel elbow bar, as shown in Fig. 23, fastened to the foot-board of the bed, either in or outside which can be raised or lowered at will. On this bar are two rollers for sliding up and down in bed.

Below the bar will be seen a swivel joint, giving the patient liberty to move or change his place in bed, or lay on his side, or by placing table of the height of the bed alongside, the patient can move to have his bed made on the first day without disturbing the fracture in the least. The splint proper is of steel, nickel plated, and so constructed that it can be adjusted to any size of limb, long or short, thick or thin. Fig. 23 (38) is for the treatment of fracture of the neck of the femur or intracapsular, the splint extending to the axilla and fastened around the body and by telescope to any length. Fig. 23, A. 10, is a movable hip joint. A. 12, counter-extension bands; from hip to knee, also telescope to get the exact length from knee to foot. The knee joint can be set at any angle by a worm wheel, as seen in Fig. 25. The thigh-rest is of wood, also changeable to any size, seen in Fig. 24. The lower limb rests in a hammock fastened by a series of movable hooks from knee to foot. Over this hammock is placed the many-tailed bandage, also fastened by those hooks, by which any suitable posterior or side splints may be used. The extension device made of a spring coil, as seen in Figs. 23, 24, 25, to be placed on any part of the splint, not coming in contact with the limb, wound up with a key to any tension from one pound to thirty; the cords running from a coil of the spring over pulleys from the foot board which is fastened to the foot in the usual manner.

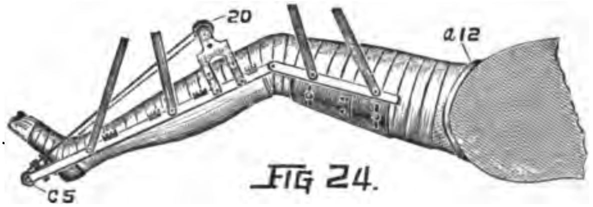

FIG 24.

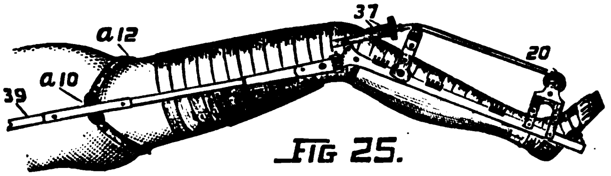

FIG 25.

In fracture of the thigh where no extension is necessary from the foot, the adhesive straps are fastened below the lower fragment and the extension device is put at any place, as seen in Fig. 25 (20-37). When this apparatus is properly applied the limb is immobilized and cannot be injured by the patient if he would. There is no interior or exterior, ensheathing or ferrule required to keep the limb so that fracture dressings cannot be removed. The interior and ensheathing callus will form by nature. (Billroth, p. 208).

In compound comminuted fractures no pains must be spared to remove particles of loose fragments. The wound should be thoroughly cleansed by antiseptics, as bichloride, 1-2000. If then, the fracture is properly coaptated and kept immobile, the bone will heal by first intention. When the dressing has to be changed or renewed, this can be done without disturbing the fracture in the least. After a practical use of this apparatus for over ten years with such success, I now present it to the medical profession.

THE memory of Chevreul, the illustrious chemist, has been commemorated in his native town of Aggess, in France, by the erection of a bronze statue of him.

Ovariotomy in the Pregnant.[*]

Dr. Disrne–Livland, has collected from literature 135 cases of ovariotomy performed during pregnancy.

Mortality of the operation is 5.9 per cent. Pregnancy was interrupted by means of the operation in 22 per cent. The puncture of the cyst and artificial induction of labor are not advised, either as a means for relief or for cure. All cases should be operated upon as soon after the the diagnosis is made as possible. This will give best results for the mother. The 2nd, 3rd, and 4th, months are most favorable—*Schmidt's Jahrb.*, No. 9, 1883.

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[*] Translated for THE MEDICAL AND SURGICAL REPORTER by Marie B. Werner, M. D.

STUDY OF THE RELATION OF GENERAL DISEASE TO THE DEVELOPMENT OF CATARACT*

EDWARD JACKSON,† A. M., M. D.

The possible causes of cataract may be considered under three heads, namely: senile degeneration, disease of the eye itself, and general disease impairing the nutrition of the crystalline lens by some influence exerted through the blood or through the nervous system.

The influence of senile change is obviously indicated by the occurrence of cataract chiefly after middle life. That such an influence exists, and is powerful, probably no one questions; but the view that it is the sole cause, or anything more than a predisposing cause in a majority of cases, seems to be negatived by the clinical history of cataract. The changes of age, those which result from the lapse of time and the purely physiological use of an organ under physiological conditions must be, in the main, slowly and steadily progressive; at least, if they were more evident at some times than others, they would never become entirely stationary or in any case retrogressive.

The one fact, however, in the clinical history of so-called senile cataract that seems firmly established by the studies that have heretofore been made of it, is that in the majority of cases the condition is not steadily progressive, but is marked by periods of rapid increase and periods of little or no change, or even in certain conditions, by periods of diminution of opacity.

I well remember a case occurring some years ago in the service of Dr. Harlan at Wills Eye Hospital, where we were inclined to think from the appearance of the opacity that it was likely to be rapidly progressive; the patient received the opinion with perfect composure and apparent indifference, the cause of which became evident when she informed us that she had been told the same thing six years before, and that there had been no perceptible change in her vision during that interval.

In a classical case reported in the *Royal London Ophthalmic Hospital Reports*, 1866, Bowman had seen the patient eighteen years before, and had made a drawing of the opacity which substantially represented its appearance after this long interval.

In a large proportion of the cases of advanced cataract that come to us, the history as obtained from the patient shows one or more periods of a rapid increase of the cloud over the sight, with other periods in which there was little or no change. In my experience it is quite the exception to find that the difficulty has increased steadily and continuously after a period of months or years. From this observation the obvious deduction appears to be that although senility may be a predisposing cause, the efficient determining cause of cataract must be of quite a different character, at least for the great majority of cases.

Of the importance of local pathological conditions within the eye-ball, particularly those of the nutritive coat, the choroid, the importance of which has been strongly urged by Dr. S. D. Risley, I do not now propose to speak. Their importance is certainly very great, but it seems to me clear that general conditions of nutrition are also of importance in this connection. It may be claimed that general conditions act by their influence on the choroid. But even admitting this, such influence often does not become evident by any changes that can be detected in that membrane, but only by the resulting altered nutrition of the lens; and the changes in the choroid, though they may exist, being secondary to the generally departure from health, the practical thing to do is to fix our attention and address our remedies to that.

The literature of cataract as carefully reviewed by Dr. de Schweinitz shows a large number of attempts to connect the occurrence of lens opacity with particular general diseases, but with conclusions based upon very insufficient data. For instance, one writer reports a series of cases of cataract in which heart disease was present, and upon the frequency of such a concurrence attempts to establish a connection. So many are the factors to be considered that probably no statistics of concurrence possible, up to the present time, or likely to be obtainable in the near future, would furnish a substantial basis for any valuable conclusion in this direction.

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*Read before the Phila. Co. Med. Soc.

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Again, very many reported cases, and this applies particularly to the striking ones that might be regarded as of great value, are vitiated by probable inaccuracy of diagnosis.

The difficulty of avoiding errors of this sort may be illustrated by a case reported by Dr. Ruschenberger, of this city, in the *American Journal of the Medical Sciences* for January, 1846. In this case, which was one of acute pneumonia, he noted that "a cataract formed in the right eye within thirty-six hours, and without any appearance of local inflammation. It was ashy white, and vision totally extinct." The case, however, proved fatal. At the autopsy it was discovered that "what was supposed to be a cataract proved an effusion of lymph within the margin of the pupil slightly adherent to the iris. This lymph formed a disk, covering the anterior face of the lens, which was transparent."

Indeed, so imperfect has been the observation of cases, and the sifting of evidence bearing upon this subject, that with regard to the share of particular diseases in the causation of cataract, it is only perhaps with reference to diabetes and ergotism that the testimony can be regarded as sufficient to establish a connection.

Of course, so many inconclusive attempts to establish such a connection between cataract and disease are of value as negative evidence that no such connection exists. They do not, however, militate against the view, that certain vices of general nutrition which may arise in many specific diseases are an important factor in the production of cataract.

Organic heart disease, gout, and arterial sclerosis, as distinct diseases, may have little connection with cataract, yet in their course there may arise the physical conditions which will in particular patients determine the opacification of the lens. To determine whether that is or is not the case will only be possible by the careful and prolonged study of individual cases, the opportunity for which is rarely accorded to the ophthalmic surgeon.

Several years ago, while in general practice, I had an opportunity of watching a case of mitral disease, during several months of cardiac insufficiency, along with serious gastric disturbances. During this period there was rather rapid impairment of vision through the development of lens opacity, presenting the ordinary clinical characters of cortical senile cataract. Finally, compensatory hypertrophy re-establishing the balance of the circulation, the digestive disorders were relieved and a better state of health was brought about. Vision slightly improved, and for two years the cataract remained quite stationary. After that I am informed her impairment of vision was very slightly progressive for several years. But, prior to her death, as her general condition became impaired, the cataract again grew rapidly worse.

Though cases of this kind may occur frequently, such a patient consulting one or more ophthalmic surgeons in the period of comparative health, they would be quite unable to establish any connection between the lens opacity and the general disease. Again, the medical practitioner who did not employ the ophthalmoscope, or who was not sufficiently familiar with its use to exclude changes in the choroid or vitreous from any share in the progressive impairment of vision, would be quite unable to give convincing evidence upon the subject.

It would seem that here, as in so many other cases, scientific knowledge is only to be advanced by the working together of the specialist and the general practitioner. It might be supposed that this could be accomplished in the general hospitals that have upon their staffs skilled ophthalmologists. But such a study to be of any considerable value must extend over a long period—many months or years; and hospital patients are proverbially inconstant, so that to follow them for the necessary length of time is generally quite impossible. The conditions of private practice, where the family physician remains the trusted medical adviser for years, are those most favorable to such a study, and under its conditions it ought to be more frequently undertaken.

This is especially the case, since the good of the patient urgently demands exact and skilful treatment in all cases of commencing senile cataract. If we are to-day able to do less than we desire to influence the general conditions, we have some positive knowledge and ability to cope with the local conditions which attend or cause the development of cataract, and the interest of the patient demands the application of our knowledge in every case. Nor is the consultation of the ophthalmologist only justified when a commencing cataract if feared. There is no condition leading to impairment of vision in the course of acute or chronic general disease in persons over fifty years of age that does not demand prompt and accurate diagnosis and appropriate modification of the management of the case.

In early life we do have failure of accommodation, and perhaps some other conditions leading temporarily to impaired vision during or after acute disease, which may go on to recovery without medical interference; but in persons past fifty years this does not occur; and, whether the impairment of vision be from cataract or from some other cause, there is equal need of a full understanding of the case.

Probably the mere calling of certain forms of cataract "senile" is partly responsible for their neglect. Cataract is not due to age in the sense that arsenical poisoning is due to arsenic. It ought to be clearly understood that cataract is senile in the same sense as the fibroid kidney, or arterial atheroma, and is quite as worthy of careful diagnosis and intelligent treatment. The interests of the patient demand his professional supervision; the benefit he may derive from it is as definite and unmistakable as in other diseases. And this supervision should include general as well as ocular conditions, and when it does we begin to accumulate data upon which the medical treatment of cataract will be a rational procedure.

What the general conditions are that specially favor the formation of cataract in the present condition of our ignorance it is scarcely worth while to speculate. Perhaps the most plausible hypothesis is the one urged by the late Dr. Isaac Hays, that the lens opacity is due to a deficiency of water. This was offered as the explanation of diabetic cataract, and that produced experimentally by injections of sugar and various salts beneath the skin of the lower animals. It is also favored by the evident shrinking of the lens when cataract is produced by feeding the animal with naphthalin and the subsequent clearing of such a lens when placed in water.

An hypothesis more nearly in accord with the present views of general pathology, and one probably worth bearing in mind, would be that of the formation and circulation within the body of substances which, reaching the lens by the normal course of the nutritive fluids, act upon it unfavorably.

Briefly, the points which I desire to emphasize by this paper are:

In general, senile change does not produce cataract, but predisposes to it.

The efficient determining causes of cataract are both ocular and general.

The general causes of cataract are not particular diseases as diseases are usually described and classified, so much as physical conditions liable to arise in the course of various diseases.

The nature, prevention, and removal of these general conditions that underlie the development of cataract offer promising fields for scientific study.

The professional supervision necessary for the making of such a study is demanded by the interests of the individual patient.

Speaking more specifically, the study of a cataract case should include the careful testing of vision at regular intervals.

The further examination of the eye to determine in how far impairment of vision is due to cataract, and in how far it is due to other causes.

The careful watching of the patient for other symptoms of impaired general health, especially for faults in the circulation, digestion, and assimilative metabolism.

Particularly at the first appearance of cataract, and at seasons of its rapid increase, would such a study of the case be of importance.

A LAW in Germany requires that all drugs intended for internal use be henceforth put up in round bottles, and those for external use be placed in hexagonal bottles. This enactment is precautionary against poisoning.—*Cincinnati Lancet.*

"Physicians mend or end us,
Secundem artem; but although we sneer
In health, when ill we call them to attend
us,
Without the least propensity to jeer."
—BYRON

THE NECESSITY FOR THE EARLY RECOGNITION AND TREATMENT OF SUPPURATIVE DISEASES OF THE TYMPANUM, AND THEIR RELATION TO CEREBRAL COMPLICATIONS.*

S. MACCUEN SMITH, M. D., PHILADELPHIA.

In bringing the subject of this paper before you this evening it is with the hope that one of the many urgent subjects of otology may be so clearly presented, in connection with the discussion which follows, as to deeply impress the busy practitioner with the importance of the early recognition and treatment of aural diseases in general.

We think it is an admitted fact that of all human ailments diseases of the ear have been the most neglected.

From the early days of medicine to the present time aural diseases have largely fallen into the hands of cunning quacks, who, through their hocus-pocus methods, have mystified the always gullible public. In fact, the science of otology has been reduced almost to the primitive teachings of the dark ages, when it was declared by the expounders of ancient wisdom that urine of the male and female, respectively, would cure ear diseases in the opposite sex, and that inflammatory conditions of the ear might be alleviated by one of their pharmaceutical specialities, composed of "the delicate admixture of the excrement of pigeons and the ashes of horses' dung, to which might be added finely pulverized black pepper."

Judging from the statements of patients, there still exists among some of the profession a belief, which is largely shared by the laity, that something mysterious or magical surrounds the diseases of the ear and their treatment. With this opinion prevalent we cannot express surprise at many of the unfortunate sufferers volunteering the information that they had been advised to "*Let well enough alone*;" "*it is bad to meddle with the ears*;" "*do not tamper*;" "*never heal a running ear or it will go to the brain and kill you.*"

It is also of daily occurrence to find that the syringe has been roughly used to throw a stream of water on an *exposed drumhead*, or that the popular but uncleanly habit has been suggested and followed of dropping greasy and other fungus-generating fluids into the ears.

This evident lack of information is, of course, due to the fact that in former years in many of our medical colleges otology had received only the minimum consideration, while in some institutions this most important branch of medicine had not even been mentioned in their curriculum. So long as students are not required to pass an examination on aural or other diseases it will be found that their knowledge of the same is almost *nil.*

It is indeed gratifying to be able to note the increasing interest and demand for special instruction on the ear and its diseases. To the recent graduate in medicine a knowledge of this branch now becomes imperative, as many of the State Examining Boards require applicants to pass an examination on otology.

From a medico-legal standpoint the subject is of the utmost importance, for certainly the time is not far distant when it will be regarded as illegal for one to so neglect a suppurative disease of the tympanum (either acute or chronic) that fatal cerebral complications result therefrom. Brain abscess and meningitis, as the result of ear diseases, are in the great majority of cases preventable. It, therefore, becomes the imperative duty of every practitioner of medicine to properly diagnose and treat such cases. This duty is especially important to the physician of general practice, inasmuch as he is usually the first to be consulted, and his direction and care of the patient at that critical time is often of vital importance.

In order to give an idea of the importance of ear diseases in their relation to general medicine and the responsibility and duty of the profession at large to the public, it will be interesting to note that it has been estimated by various authors that from 43 to 76 per cent. of all brain abscesses arise, either directly or indirectly, from suppurative disease of the middle ear. To this I should like to add that the same figures would probably not exaggerate the large number of cases of meningitis and pyæmia which, on account of their doubtful etiology, are termed and accepted as "obscure." Barker, as quoted by Keen and White, estimates that not far from two thousand deaths, caused by diseases of the ear, annually occur in Great Britain, with a population of little more than one-half that of the United States.

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* **Read before Philadelphia County Medical Society, 1893.**

These are, indeed, impressive figures, and are especially deserving of serious consideration, from the fact that there are annually dying in the United States probably four thousand of her inhabitants from brain abscess, the direct cause of which is some pathological change in the ear. Our belief is that should these cases receive early recognition and proper care the mortality, at least, would be greatly reduced and the fatal complications in most cases be prevented.

As a rule, an acute inflammation of the tympanum is painful in the extreme; and yet it must not be forgotten that we will at times find a case where the membrana tympani will rupture with the consequent flow of discharge, which will be the first and only symptom to attract the patient's attention. These cases, however, yield promptly to treatment, unless dependent upon some enfeebled condition of the constitution. On account of the symptoms not being urgent they attract but little or no attention, and, therefore, are allowed to form a good foundation for a chronic purulent suppuration with all its possible serious consequences.

An acute suppurative otitis media is usually the result of the acute non-suppurative variety (commonly known as earache) the symptoms of which briefly are, a sense of fulness in the head accompanied by more or less tinnitus and so-called "neuralgia." In my experience these symptoms precede the real pain several hours, or in some cases it may be several days. The pain, which is very severe, generally occurs at night, and is referred to the ear and along the Eustachian tube. In most cases considerable fever is present, and marked impairment of hearing. As the pus accumulates the bulging outward of the membrana tympani correspondingly increases, and the tension resulting therefrom intensifies the pain almost beyond endurance. It is in this state or stage of the disease that immediate relief is so earnestly demanded for the present and future welfare of the unfortunate sufferer.

Should the patient have the good fortune to have the distended drum promptly punctured in order to promote the free escape of pus, and this followed by gentle inflation through the Eustachian tube, together with general antiseptic care and the use of leeches, the hearing will in most instances be quickly recovered, the discharge will cease, and all the functions of the organ will soon be re-established.

If, however, the pus is not promptly evacuated the patient is in imminent danger of one or more of the serious consequences that follow such neglect. Should the drum be so thickened and bound down by adhesions as to enable it to resist the pressure, as is sometimes the case, the pus will then, by one of the several means of communication, produce a septic inflammation of the brain or its coverings, which usually has the result of a prompt fatal issue. Or the pus may communicate with the mastoid antrum, thence to the mastoid cells, thereby subjecting the patient to all the serious, and ofttimes fatal, complications of a such a condition.

Fortunately, however, these complicattions are not of frequent occurrence from acute suppurative otitis media, for, in neglected cases Nature has wisely provided a drum that will usually rupture of its own accord when the pressure for accumulated pus reaches the dangerous point; or, as it occasionally does, the pus finds an exit through the Eustachian tube into the throat. This is particularly the case in children, because the calibre of the tube is proportionately much larger in early life.

Brain and mastoid complication arising from a suppurative inflammation of the ear are in nearly all cases a result of the chronic variety, although I have seen several fatal cases from the acute suppurative form. There is usually a history of chronic discharge, frequently even extending over many years. At times the "running" will cease, and the physician and patient (if he be under treatment) will congratulate themselves on the apparent success of their therapeutics, when quite unexpectedly the patient again applies for relief from a severe pain in the ear, caused either by exposure to cold or wet, or it may be from some trivial accident, such as a slight blow upon the ear or head.

Any patient suffering from a suppurative otitis media, be it of the continued or recurrent form, is in constant danger (either from exposure to cold or traumatism) of a fatal termination. "Many apparently unaccountable cases of fatal coma are explained in this way; an old cerebral abscess, which has already lasted weeks or months without giving rise to any definite symptoms, suddenly giving away and bursting into the ventricular or subarachnoid space." It is, therefore, a safe and wise rule, as well as duteous teaching, to regard every person with a discharging ear as being in such a condition that serious, or even fatal, complications may arise on the slightest provocation.

Recent bacteriological investigations demonstrate beyond question that the quantity and especially the quality of the discharge is an all-important factor in considering the prognosis of individual cases. The popular impression is that so long as a discharge is copious and devoid of fetor it is harmless, and of such little moment as to demand treatment only from a point of tidiness or inconvenience. This belief, notwithstanding its almost universal acceptance, is misleading and is calculated to cause in the future as it has done in the past, much misfortune.

It is entirely true that in a freely "running ear" we have present the best possible condition to prevent brain complications, and yet we must not lose sight of the fact that a decrease in the discharge, and especially if it should stop suddenly, must be viewed with some degree of alarm, inasmuch as this sudden or more gradual decrease in the flow is frequently caused by inspissated masses of mucus and pus collecting behind a wall of dried and hardened epithelium intermixed with pus, and entirely occluding the opening in the ruptured drum, consequently preventing the escape of discharge which continues to form until the accumulation causes much pressure, and the brain or mastoid complication may be the result.

Generally speaking, a discharge of pus without fetor is considered harmless, and, therefore, in most cases receives little or no notice, unless for cosmetic purposes. Although the number of observations on the pathology of the putrefactive changes within the ear have been limited and confined to the researches of only a few investigators, sufficient information is at present made known from the recent discoveries in micro-biology to establish the fact that non-fetid pus from the ear contains large quantities of pathogenic cocci, and is, therefore, highly infectious and dangerous to life. In fetid pus it is true that cocci are also found, but they are of the diplococci variety, and the bacilli which are also present largely predominate.

Barker, who has given this subject much thought and study, writes as follows: "From his inoculations of animals with cultivations and pus emulsions Rohrer came to the conclusion that the various forms of bacilli found in the fetid secretions of the ear were not pathogenic but simply saprophytic, the animals inoculated with the bacilli either in the tympanic cavity, the auricular veins, or the peritoneum, being alive and well at the end of some months, little or no action having taken place locally. But of the pathogenic nature of the cocci there could be no doubt, from his experiments on animals typical septic diseases of various kinds being produced without fail. These observations appear to me to possess a special interest as regards the question of fetor from the ear. It has been commonly taught hitherto that a bad smell from the ear is an important factor in the prognosis of aural inflammations. My own observations, however, for a long time past have led me to question this conclusion very seriously, and to hold and teach that some of the most dangerous sequelæ of otitis media may be met with where the secretions from the tympanum are either nearly or quite odorless."

"If this be true, and I fully believe it to be so, the explanation is found in Rohrer's observations regarding the pathological cocci found alone in the non-fetid discharges, and the preponderance of merely saprophytic bacilli in the fetid. We must not, therefore, think the less seriously of a discharge from the ear because it is odorless, but must endeavor to get rid of its exciting cause just as strenuously as if it were most offensive. This is only what we might expect from an experience of ordinary suppurating wounded surfaces in other parts, which in many cases give rise to serious or fatal septic complications without giving off any fetor."

Caries and necrosis are a frequent and serious complication of suppurative otitis, and are produced by ulceration of the inflamed mucous membrane of the tympanum, by extending to the deeper layers of that membrane (which act as the periosteum on the inside of the osseous cavities) and finally attacking the bone itself.

Politzer describes the process as "an infiltration of round cells into and around the fibrous tissue which penetrates the substance of the bone as offshoots from the mucous membrane. These round cells may undergo three transformations: they may break up and be absorbed, they may be converted into connective tissue in which depositions of lime may take place, and we then have a thickening of the bone, or they may, by degeneration and erosion, produce an ulcerative osteitis. This ulceration may be due to constitutional taint, or to retention and decomposition of secretion, or to the catarrhal ulceration and wasting of the mucous membrane."

As the carotid canal (through which passes the carotid artery) forms the anterior wall of the tympanic cavity, and the jugular fossa (in which lies the bulb of the jugular vein) constitutes the floor of the tympanum, it will be readily seen why dangerous and even fatal hemorrhage may occur as the result of caries and necrosis of the middle ear. The bony walls of the tympanum are always thin, and in some cases the roof is entirely absent. The middle and back part of the temporo-sphenoidal lobe and the outer and front part of the lateral lobe of the cerebellum are in direct contact with the middle ear. Knowing this intimate relation of the tympanic cavity to the brain to exist, it does seem surprising that many more fatal results from inflammatory diseases of the temporal bone are not recorded.

As the skin of the external auditory canal (being somewhat modified) is continuous with and forms the outer layer of the membrana tympani, suppurative otitis media may be set up from without as well as by infectious matter reaching the tympanum through the Eustachian tube, the mucous membrane of which is continuous with that of the throat and forms the inner layer of the drum. And, as many of the mastoid cells lie below the level of their opening into the middle ear, and the floor of the tympanum is in part below the orifice of the Eustachian tube, it will be seen how a suppurative disease of the tympanic cavity, or even the mastoid cells, may continue in a chronic state for months or years.

In suppurative otitis media brain abscess may be induced by direct continuity of structure, or the infectious matter may be communicated to the dura mater, causing subcranial abscess or diffuse meningitis, or to the bloodvessels in the diploe giving rise to osteo-phlebitis, thrombosis of the lateral sinus, or pyæmia. Or, as is the case in suppurative otitis externa, likewise in neglected otitis media, the pyogenic germs may find their way between the opening formed by the non-union of the vaginal and mastoid processes, thus producing a superficial mastoid abscess.

Through carious involvement of the malleus and incus there is frequently a direct communication between the tympanum and the mastoid antrum and cells, this being the usual way in which pus invades these cavities and forms a true or deep mastoid abscess.

There are many other routes along which the infection may travel; it may extend through the hiatus fallopii or the aqueductus vestibuli, or down the internal auditory meatus, or it may extend along some of the numerous small veins which run between the internal and middle ear on the one hand, and the dura and pia mater on the other.

I will now briefly relate one interesting case of mastoid disease following an acute suppurative otitis media.

On March 26th, 1892, I was called to see Mrs. L. B. and found she had been suffering from a severe pain in the left ear and head for two weeks. On inspection nothing could be seen that would suggest a forming abscess of the middle ear, and as the pain in the head was so general it quite deceived the attending physician. On examination through the meatus we found a greatly inflamed drum and bulging of Shrapnell's membrane. We immediately opened the drum, which allowed a free escape of pus and greatly relieved the patient's pain. This was followed by leeches in front and blisters behind the ear; after which hot poultices were applied to promote suppuration. From this line of treatment entire relief was obtained for five weeks (but the ear continued to discharge), when pain was complained of over the mastoid; in fact, it involved the entire left side of the head.

The usual active measures were at once adopted to relieve pain, but the brief cessation of suffering was only while under the influence of drugs. (It is well to state that neither the mastoid nor any part of the head showed any evidence of either redness or swelling). Three weeks later she expressed her willingness to submit to an operation, and, with the kind assistance of Dr. J. M. Barton, I opened the mastoid cells, evacuated the pus, and found, by using the syringe, that the opening in the mastoid communicated with the external auditory canal. This established perfect drainage, which relieved the patient of all pain and discharge, but the hearing was found to be destroyed.

In August we removed the drum and ossicles, which resulted in the almost immediate restoration of her hearing, which remains normal at this writing.

As all inflammatory conditions and abscesses of the brain are most serious, and especially so when dependent upon disease of the temporal bone, it, therefore, becomes our imperative duty to make every effort to prevent these unfortunate complications, rather than to hope for their relief after having once developed.

It is not the object of this paper to enter into the subject of treatment from a general surgical point of view, but simply to offer such suggestions as are thought to be in a measure preventive, for it must now be admitted that many of the serious complications arising from diseases of the ear have much to commend the probability of their being preventable. As already shown, the majority of brain and mastoid diseases are due to a suppurative disease of the tympanum, and are usually the result of the chronic from of discharge.

Most cases when applying for treatment give the history of a "running ear" extending over months or years, and that it has resisted treatment in the hands of many competent physicians. In cases of chronic discharge from the ear that do not yielded to due and proper care it is now our rule to advise the removal of the drum and one or more ossicles.

By this surgical procedure we establish a free drainage and make an opening into the tympanum sufficiently large to admit of the site of the disease being properly treated by antiseptic washes and applications, and, if this interference be established before brain or mastoid complications have set in, these developments will almost surely have been prevented; besides, the discharge in nearly all cases will cease, and the hearing in the majority of patients greatly improve, while in others it becomes quite normal.

Or, if you have a case presenting symptoms of cerebral irritation or abscess where there is a chronic "running ear," and it does not yield promptly to the above measures in conjunction with leeches to the mastoid, etc., it may be due to pus confined in the mastoid antrum, and no time should be lost in making an incision over the mastoid and trephining the same half an inch behind and above the centre of the external meatus. Within the past year I have seen five cases relieved by this method of treatment. In suspected mastoid disease an incision down to the bone is often delayed too long, and, perhaps, is never done too soon.

Destruction of Microbes by Infusoria.

D. Harvey Atfield (*Brit. Med. Journ.*), a student in the Hygienic Institute of the University of Munich, recently carried out a number of experiments at the suggestion of Dr. Emmerich for the purpose of determining whether microbes of polluted river water are destroyed by infusoria. The experiment shows very clearly that the low forms of animal life which abound in river water are exceedingly active in the destruction of bacteria, and hence of service in the purification of water. In one instance, water which contained 3,000,000 bacteria per cubic centimeter (¼ dram) was found to contain at the end of ten days after infusoria was introduced only 13,000 bacteria, a proportionate decrease of 200 to one. In another case the decrease was 500 to one. In another case of water placed under the same conditions, without the infusoria, the number of bacteria increased from 700 per cubic centimeter to 121,500.

SOCIETY REPORTS.

SECTION ON ORTHOPÆDIC SURGERY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting November 17, 1893.

Dr. J. B. Deaver exhibited a patient showing the result of subcutaneous osteotomy of the neck of the metatarsal bone for hallux valgus and gave the history of the case.

DISCUSSION.

Dr. H. Augustus Wilson opened the discussion by exhibiting a cast of a similar case in which there was extreme hallux valgus of the right foot, the metatarsal bone being decidedly pushed from the normal position underneath the second biceps. It was originally the intention to amputate the toe. A bursa was present on the right foot, and this was found to be a segment of the joint, which the patient had opened thinking it a corn, or a bunion. The pain was excessive.

Dr. T. G. Morton: The cases of this form of toe distortion which have come under my care have generally been accompanied by serious joint disease, so much so, that excision of a wedge including the entire articulation was required. I have never performed osteotomy which is at once so simple and efficacious for the moderate forms of the malady. I believe that in the great majority of cases that the operation as performed on the patient before us, which has been so eminently satisfactory is all that generally would be required.

Dr. G. G. Davis: Dr. Deaver speaks of the shape of the shoe as being the cause of the deformity, but I cannot fully agree with him. In some of these cases there is a marked rheumatic element. I do not think it is *always* produced by pressure. I cannot believe that an ill-fitting shoe alone, in all cases, produces it. There is often some rheumatic condition in the neighborhood of the joint.

Dr. Deaver: In answer to Dr. Morton, I confess I have not done osteotomy on so pronounced a case as the one referred to, but my deductions from the literature on the subject and from my experience with the operation, are that it would fulfil the indications in the case referred to. I have no doubt of its superiority over amputation and that we can promise the patient a good result. We all know there is a great objection to amputating the great toe, therefore, the more conservative operation is the better one if it can be done. We also need to note the absence of evidence of adhesions in the joint after the osteotomy.

In my own case, the condition was the result of a frost bite, but I believe with Dr. Davis, that a rheumatic element is to be considered. In any case where the deformity exists, the sooner it is corrected the better. I do not believe in any of the ordinary appliances; all of them are unsatisfactory; they make the shoe large and unwieldy and simply add to the existing deformity. The operation is not attended with any risk. We all have operated upon cases of knock-knee where there was greater deformity and made good corrections.

Dr. Wilson's illustration of the prominent head of the metatarsal bone being mistaken for a bunion only shows how careful the general practitioner should be, and in any case of doubt refer it to an authority.

Dr. T. G. Morton brought before the Society a very unusual instance of

GENERAL BODILY DEFORMITY, WITH ANKYLOSIS OF THE SPINE, UPPER AND LOWER EXTREMITIES, ETC.,

in which he asked the attention of the members as to the possibility of any operation affording improvement, and gave the following brief history of the patient:

"In July last I received a note from Dr. Wright, of Gipson, Alabama, asking for permission to send to the Orthopædic Hospital a case of deformity in an adult which was thought could be improved. As it was impossible to obtain an exact description of the case, the patient was allowed to come North, and accordingly he started on his journey; first riding fifteen miles in an ox-team, then without change to this city. He was so deformed that he had no use of his lower extremities and was confined in a sitting posture in a rude, home-made chair which he constantly occupied. The following notes of the case were taken by Dr. Walker, of the Hospital.

Family History: Amos C. G., aged 32, of Gipson, Alabama. Parents living. Father æt. 55, has had rheumatism from boyhood. Mother æt. 65 years, suffers almost continually with neuralgia. Two brothers living, both have had rheumatism.

Previous History: Patient was always well until ten years old, when he had an attack of rheumatism commencing in the right hip-joint; the knee-joint of the same limb was involved, then the ankle, and later the joints of the left lower extremity, spinal column, and finally both shoulders, elbows, wrists, and to a less degree the fingers and toes. The extension as above described occupied a period of three years, during which time he suffered intensely and could be moved only with great difficulty. Joints were hot and swollen—fever moderate. His limbs were in one position during all this time, though not then ankylosed; he says that he could move but the effort caused intense pain.

At the end of three years, 1874, the pain became less acute, gradually lessening until the year 1885, at which time he says no rheumatic pain remained, but the joints were stiff as at the present time.

During the years of his first attack (from 1871 to 1874) he spent much of his time in an ordinary chair, leaning upon the arm of the chair which was placed along side of him, this position evidently accounting for the lateral curvature and some of the deformity of the trunk now seen. In 1874 he had a chair made of the same pattern as the one now in use, but for a time had to support the greater part of his entire weight by the arm pieces (two pins, one beneath each shoulder joint) because of the pain in the hips and spine if those joints were subjected to any strain. This would explain deformity seen here (elevation of shoulders).

This chair was made with a cross piece passing beneath the knees for support. Femora found curved at this position. In 1886 had another attack of rheumatism affecting principally the shoulder joints and those of the neck. Several joints have been affected at different times since then.

Present state:—Head normal in size and shape; wears 7⅛ hat.

Trunk undersized and mis-shapen, antero-posterior and lateral curvature of spine which is perfectly rigid.

Legs flexed on thighs, almost in contact; thighs on pelvis and in contact with abdomen; and pelvis upon the thorax; the anterior superior spinous processes of the ilia being almost in contact with the lower ribs.

All the joints of the lower extremities are firmly ankylosed with the exception of the phalanges.

The right arm can be bent at an angle of 45° with the shoulder. The right elbow is fairly ankylosed, no pronation or supination. The left arm can be brought to a right angle with the trunk at the shoulder; left elbow firmly ankylosed about at a right angle; pronation and supination normal; wrist and phalangeal joints normal.

Weight, 52½ pounds; Measurements: Height from top of head to lowest part of body as he sits in chair, 22 inches; right calf, 5⅝ inches; left calf, 5⅝ inches; right arm, 5¾ inches; left arm, 4¾ inches; right fore-arm, 6 inches; left fore-arm, 4¾ inches. Appetite fair; digestion well performed; tendency to constipation. Heart, liver and lungs normal; urine highly acid; sp. gr. 1030; excess of urates; no abnormal constituents.

I shall be glad for the members of the society to examine this patient and then to give their views as to the possibility of any good being attained by operative interference. From a careful study of this case I feel that little if any improvement can be secured by any operative treatment on account of the inability of the man to use his arms to any extent, the ankylosis of the spine which precludes any movement of the body, and finally the excessive atrophy of the lower extremities, which, even if brought out straight, would not support the weight of the body. Probably the best that can be done will be to give him a suitable apparatus to support his arms as an attachment to a proper spinal brace.

DISCUSSION.

Dr. H. Augustus Wilson: Dr. Morton speaks of the possibility of reproducing one of his successful experiences, and, after bringing the legs down, of adjusting artificial limbs. It seems to me that osteotomy in this case would be an unwarrantable procedure, even if the legs were brought into good position, the curvature of the spine, the rigid pelvis, and the position of the head to one side, would make the result one of disappointment even if osteotomy in itself were successful. I am rather of the opinion that a wheeled chair would be the best thing for him. He has probably sufficient motion of the shoulders and hand to enable him to move a chair about. Something similar to the chair he now uses, with wheels added, would be a wise arrangement so that the patient could have more freedom of motion. The outdoor life thus induced, as well as the movements of the arms in propelling the chair, would be decidedly beneficial. In the sitting posture he could adopt some occupation by means of a movable shelf attached to the chair, and thus be relieved of the strain of idleness.

Dr. Frank Woobury: Rheumatism in children is not a very rare affection, but this patient certainly presents conditions rarely met with, and is a most interesting case. Probably it would be more correct to regard it, not as a case of rheumatism but as an illustration of arthritis deformans in an advanced stage of the disease. As the patient is now thirty two years of age, and has been suffering for twenty years, or more, of course the long course of the disease would be against any marked benefit arising from an operation, especially as there is only infantile development of the lower extremities. Regarding it as chronic arthritis, we recall the fact that in these cases, cod-liver oil, massage, gymnastics, hot applications, and electricity to improve the muscular tissues are able to accomplish much good. By directing such treatment, especially to the upper extremities, he might gain sufficient range of motion to feed himself or to propel himself in a wheel chair and get more comfort out of life. It must, of course, be determined, surgically, whether there are any fibrous adhesions in the elbow or shoulder joints which could be broken up by forcible flexion, but as regards anything in the way of operation, I think that more radical measures might safely be postponed until the limit of improvement by the treatment just outlined, has been attained. Certainly a six months' course of medicine would put him in better condition for operation, even if it were determined that such proceedings are necessary.

Dr. G. G. Davis: What struck me in looking at this case is the fact that the patient appears to be in a moderately healthy condition and would very likely stand operative procedures well. It would be a great gain if he could be made to stand upright. Failure might arise, of course, from sepsis, etc., but the advantages from straightening the extremities would be so great, and his health appears to be so good, and the dangers from osteotomy so small, that I think some operation might be undertaken. His condition could hardly be worse and he might possibly be benefitted; to what extent, I am unable to say, but it might be worth the attempt.

Dr. H. R. Wharton: I would like to ask Dr. Morton if he would have any hesitation in giving this man an anesthetic. It seems to me that I should have some anxiety in doing so. So far as osteotomy is concerned, certain corrections might be made but I do not really see how the condition of the patient could be much improved. I do not think much motion could be obtained. I am inclined to think that the judicious course would be to make him comfortable by a mechanical contrivance. I have had considerable experience with osteotomies, and the wounds usually do well, but in some conditions of the tissues, sloughing occurs, and the patient is very sick from the operation itself. I should be rather inclined not to operate.

Dr. DeForest Willard: In my judgment it would be doubtful whether the patient would be able to manage artificial limbs even if his legs were put into good position. Necessarily the artificial legs would be heavy, and I doubt whether he would be able to balance himself since his back and neck are so rigid. Osteotomy is as operation, simple in itself and not attended with any special danger.

I know of a case in this city, not quite so much deformed as this one, but having its origin in rheumatoid arthritis. It did not occur so early in life but otherwise it is quite similar. Nothing could be done for the patient. Another case is that of a man so much deformed that he has lain in bed for twenty years. The disease in him is aroused by any attempt at motion of the joints.

Dr. J. B. Deaver: I should hesitate to change the topography of the blood vessels on account of a cardiac diathesis. Several osteotomies would have to be done, and it is a question in my mind whether any great gain would be secured. The bones are particularly small and I question whether they would be able to endure any weight even if they were straightened.

Dr. T. G. Morton: In again referring to the question of anesthesia, I would like to ask if any of the gentlemen would fear to administer ether in such a marked case of spinal curvature; especially in so serious a case. The only case of sudden death, under ether, that I ever witnessed was in a patient at the Pennsylvania Hospital; within thirty minutes after operation the patient died from œdema of the lungs very suddenly. My own feeling is that there would be a great risk in this case and that the suggestion of a wheeled chair would be the best plan to follow.

RESECTION OF A RIB FOR EMPYEMA FOLLOWED BY LATERAL CURVATURE OF THE SPINE.

Dr. G. G. Davis exhibited a boy in whom two ribs had been resected and there was a resultant lateral curvature. He showed an apparatus which had been adjusted for the purpose of reducing the projection arising therefrom. The jacket was adjusted so that it made pressure on the pelvis, in the axillary fold, and counter-pressure on the opposite side by a pad.

DISCUSSION.

Dr. DeForest Willard: I should like to ask Dr. Davis whether I understood him to say that the deformity would probably grow worse as time goes on? My experience is that such deformities tend to improvement. I had occasion a few weeks ago to examine a case upon which I operated in 1872 for empyema, a girl then five years of age. Suppuration continued for six months and there was great deformity at the time; yet the patient has become absolutely straight and I had difficulty in determining upon which side the operation had been performed. In a number of other cases, the same result has been obtained and the improvement has been very marked under exercise and expansion of the lungs, which probably is the most important element.

In regard to the use of apparatus I have to say that I have never seen the deformity following empyema benefitted by any form of appliance. I rather look upon it as injurious by interfering with expansion of the lungs. I have always used some form of exercise with marked benefit.

Dr. H. Augustus Wilson: I would like to say that it appears to me that this case has reached the stage in which there are present all the conditions of idiopathic lateral curvature and marked rotation with the usual distortion of the thorax. It is a question whether apparatus does not tend to still further produce muscular atrophy and whether the chest will not decrease in size, the lateral curvature and rotation becoming more pronounced. The question is not settled in my mind whether most of the muscular atrophy is produced by scoliosis or by apparatus.

This particular apparatus has, in my judgment, one serious objection; the straps passing over the shoulders. The shoulders are brought into line by simple downward pressure even when there is a crutch resting upon the hips. Mothers will loosen the straps around the waist to give the child more comfort and the apparatus is therefore sure to drag still further upon the shoulder straps. The shoulder straps prevent a displacement of the apparatus, even when the lower bands are loose, and therefore they should be dispensed with. It is my experience that apparatus too often only conceals the deformity beneath but does very little in the way of correction.

Dr. T. S. K. Morton: I do not think I have had a case which improved under apparatus. I have obtained good results from the application of head extension at night with suspension at times during the day.

In regard to the use of a bicycle, of which Dr. Taylor speaks, it is a question, in my mind, whether this is wise, as we are already noticing in literature reference to a condition of kyphosis to which this kind of exercise gives rise.

Dr. J. B. Deaver: My experience fully accords with Dr. Wilson's. I have operated upon a large number of cases, many of them tuberculous; others resulting from pleurisy.

Relative to the lateral curvature which follows, I would say that most cases recover. I advise against appliance under the circumstance; I believe it to be a serious matter to interfere with chest expansion. Ordinary appliances are misleading, and, to my mind, do harm, often resulting in paraplegia. If support is required, my plan is to use plaster of Paris bandage the length of the spine, and at the end of a month I replace it by another and the patient is thus straightened every time the bandage is altered. Those of us who are familiar with Dr. Adams' dissertations, know that he lays great stress upon this point, unless there is actual disease of the vertebral column.

Dr. G. G. Davis: The deformity in the case shown to-night has been more marked lately than it was a few weeks ago. I do not think that it will increase as time goes on, after sound healing has taken place and the lung begins to expand, but I am of the opinion that an apparatus for the resultant curvature is of marked benefit in the treatment for the condition as now present.

Some of the remarks made to-night apply to cases of pure lateral curvature and not to such a condition as that of the case exhibited. Dr. Deaver refers to paraplegia following the use of appartus. To this I would say that perhaps paraplegia may follow lateral curvature but I have never seen it as such a result.

As to the question of the use of a plaster jacket or brace, that is a matter of opinion: I do not think that this question has been definitely settled yet. When we find such men as Bradford, of Boston, and others, describing them one cannot regard apparatus as being always out of place.

In regard to this special case I do not see that healing would be delayed by an appliance. There is a projection on one side which is quite marked. I can see how expansion would be hindered by having the chest encircled by bandages, but in this jacket there is no constriction of the chest. It is the pelvis which is embraced and pressure is made over the projecting side and not the constricted one.

Dr. Wilson's suggestion in regard to the shoulder straps is a good and practical one, and I will watch the case to see that displacement does not occur. I would not, by any means, urge the continual use of such apparatus, but in the early period of recovery where the sinus has not healed, or just healed, I think it is good treatment, as without it, I think, in a comparatively short space of time, the deformity becomes more marked. I do not believe in substituting for exercise any mechanical appliance because I think nothing can take its place. Where an apparatus is supported from the hips, and there is no pressure made on the contracted chest, and the apparatus is capable of removal, if so desired, for exercise, I do not think it would at all hinder the recovery of a case.

Dr. W. J. Hearn reported a case of

SUPPURATION OF KNEE-JOINT

that he operated upon by free incision and washed out with 1-2000 bichloride of mercury solution. The patient made a rapid and complete recovery, ultimately obtaining full usefulness of the joint. Dr. Hearn advocated early and free incision for exploratory purposes because it enabled the surgeon to effectually evacuate the contents of such an abscess—and prevent its rapid destruction of the joint.

DISCUSSION.

Dr. Deaver: This particular case is interesting for the reason that last winter I saw, with Dr. Lloyd, a case of middle ear disease in which there was pronounced sepsis. I opened the abscess and removed pus; this Dr. Abbott examined for micrococci but without finding bacilli. I should rather take exception to Dr. Hearn's remarks that he thinks this treatment wise in all cases. I scarcely think that in all cases it would give good results.

Dr. T. S. K. Morton: I hardly agree with Dr. Hearn in advocating the use of strong a solution as 1-2000 bichloride of mercury. My experience is, in using antiseptics in joints, that they are a source of danger; that it is not possible to use such a strong solution without producing lesions. Iodoform appears to me to be the best antiseptic to use; in fact I do not use bichloride for washing out joints, as I find simple boiled water to be quite effective and without danger of doing harm. In using strong antiseptics there is a possibility of producing synovitis.

Dr. R. B. Cruice: In May 1892, I saw a case of a girl age three years, who had a suppurative knee-joint. She had been taken to the University and to the Children's Hospitals and had been told that nothing could be done except to amputate the limb. I opened the joint, passed a probe through to the opposite side and then injected the joint with peroxide of hydrogen, twice a day. At the end of thirty days the wound closed and I applied a splint. I did not see the case again until September, when the child was running about and appeared perfectly healthy. There was perfect motion in the joint.

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SATURDAY, DECEMBER 16, 1893.

EDITORIAL.

IDENTITY OF THE STREPTOCOCCUS PYOGENES AND THE STREPTOCOCCUS ERYSIPELATIS.

Knorr (*Berliner klin. Wochenschrift,* 1893, p. 698) has reported the results of a comparative study of these two streptococci. The streptococcus pyogenes was isolated from the pus from an abscess which resulted from a slight injury to the great toe of a man of about forty years. The suppuration was accompanied by intermittent fever, high temperature and rigors. Later an abscess developed beneath the skin of the right thigh. From the pus from this abscess a pure culture of a streptococcus was obtained. It grew in long chains and was pathogenic for mice. Other pyæmic abscesses developed.

Four weeks after the attack of illness a severe rigor occurred with fever and the appearance of a typical erysipelatous eruption about a bed sore over the sacrum. Two days later isolated areas of erysipelatous nature were observed. From these pure cultures of a streptococcus were obtained. Cultures made from the blood did not develop. The two streptococci, one from the primary abscess, the other from the erysipelatous inflammation were identical in their morphology, cultural characters and in their pathogenic properties. The author believes, therefore, that this case demonstrates, more clearly than has heretofore been done, the identity of these two streptococci.

The fact has been known for a long time, that the difference between these two streptococci was very slight, as the description of one will apply to the other save perhaps, in the pathogenic properties. Bacteriologists have not been agreed as to the identity of these two important organisms. The results of a few other investigators concerning their identity are interesting. Prudden (*The Amer. Jour. of the Med. Sci*, 1889, p. 229) compared very carefully the *streptococcus pyogenes* and *streptococcus erysipelatis*, but found that there was not a single constant feature of difference between them that could be detected by cultural characters (parallel cultures), or by inoculations into the smaller animals. Fraenkel (*Centrablatt f. Bakteriologie u. Parasitenk,* 1889, Bd. vi. p. 691) isolated from a case of purulent peritonitis a streptococcus which had apparently been the suppurative agent, and succeeded in producing erysipelas on the ear of a rabbit with a pure culture of the same streptococcus. When it was inoculated beneath the skin on the back of mice and rabbits it produced suppuration. This case is analagous to the one described by Knorr. Welch (*The Am. Jour. of the Med. Sci.*, 1891 p. 439.) compared these two streptococci, but was unable to detect any difference between them. He adds "The efforts to differentiate into distinct species the pathogenic streptococci have thus far met with little success, so that the weight of opinion favors the view that the streptococci of erysipelas, phlegmonous inflammations, septicæmia, puerperal fever and the various forms of angina belong to one and the same species."

In an article published in the *Supplement of the Report of the Local Government Board*, London, 1887, Klein discussed the various properties of a large number of streptococci which he had isolated from various sources. Among them were the two species under consideration. The results which he obtained led him to conclude that there was a difference between these two organisms. More recent writers, however, tend to group the streptococci rather than to differentiate closely allied if not identical species. This is important in view of the large number of affections that have been attributed to the action of certain streptococci. The experiments of Knorr are exceedingly interesting, yet he does not fully establish the identity of the two species as it was possible that there was a mixed infection. Pasquale (*Beitrage zur path. Anat. u. zur allgemeinen Path.*, Bd. xii, 1893, p. 433), in an exhaustive study of streptococci, points out the fact that two streptococci which were capable of being differentiated were found in the different organs of the same animal.

SHOULD THE PRACTITIONER SUPPLY HIS OWN MEDICINE?

In reply to this query it must be said that, in the present state of medical affairs, as a general rule, in a vicinity amply supplied with competent pharmacists, the practitioner has no right to compound or to carry drugs to dispense with his own hand to the patient.

Holy Writ says that "the laborer is worthy of his hire." And so is the trained, qualified pharmacist. Pharmacy and medical practice, while a close affinity subsists between them, are separate and independent branches of the healing art.

The physician in a large city, who carries and dispenses medicines, by that act loses caste, he does an injustice to his patient, and appropriates to himself what justly belongs to the druggist who depends largely on prescriptions for his support.

It is alleged that the physician saves the patient the expense of prescriptions and so retains him. But the fact is he fails in both. In very many cases he might as well dose his patients with fragments of chips, pebbles or other inert substances as to give him the stale, petrified tablets which, with time, have lost their potency. His patient has no respect for the preacher-practitioner combination, nor has he any enduring faith in the walking apothecary shop, hence, when he is really seriously ill he will pay only for the straight article.

"Let the shoemaker stick to his last" is an old and true saying, If we would stop counter-prescribing, the pharmaceutical treatment of gonorrhœa and amenorrhœal (?) troubles, then we must give to the honest pharmacist what justly belongs to him. Pharmacists as a class are appreciative, and no physician ever patronized one and was not repaid two-fold. What we have said does not apply to the country practitioner, nor to the use of emergency drugs for night practice.

BACTERIOLOGICAL NOTES.

THE PYOGENIC PROPERTIES OF THE TYPHOID BACILLUS.

In a paper by Hintze (*Centralblatt. f. Bakteriologie u. Parasitenkinde*, XIV, 1893, p. 445) on the duration of time and suppurating properties of the typhoid bacillus in the human body, are recorded a few interesting facts concerning the properties of the typhoid bacillus. A man was admitted to a hospital ten months after an attack of typhoid fever, on account of a swelling over the tibia which appeared first four months after the attack of the fever and had continued to increase in size. This swelling was found to contain pus from which cultures were made. These developed colonies of bacillus pyocyaneus and of the typhoid bacillus. The identity of the typhoid germ was determined by a very careful study of the organism. Hintze believed after a careful study of the organisms obtained that the typhoid bacillus was the only germ present which could have produced the suppuration. This conclusion is contrary to those of Baumgarten and others who considered the typhoid germ to be devoid of pyogenic properties. The author cites another interesting case of typhoid fever where the patient died. The post-mortem showed that the cerebral meninges were in a state of purulent inflammation, and upon the examination of the pus only typhoid bacilli were found. Hintze brings forth reasons which he believes are sufficient to show that the pus was not produced by pyogenic cocci which had perished prior to the examinations. These observations led the author to draw the following conclusions:

1. That the bacillus of typhoid fever could live in the body for at least ten months.

2. That it is able to produce chronic post-typhoid suppuration.

3. That it can cause suppurative meningitis.

TUBERCULIN IN TREATING PULMONARY TUBERCULOSIS.

Bey and Kartulis (*Zeitschrift f. Hygiene*, XV, 1893, p. 228) report the results of some very interesting work in the treatment of tuberculosis with tuberculin together with hygienic and climatic influences. They report 48 cases in which recovery was secured in 16 or 35 per cent. The article is a long one containing full details of the injections and their reactions, the condition of the patient as determined by physical examination, etc. The results which were obtained, as set forth in the conclusions drawn by the authors, are given:

1. Beginning pulmonary tuberculosis can be cured with tuberculin in from 3 to 4 months.

2. In more advanced cases of phthisis recovery is more slow, six months to a year being required.

3. Severe cases with not large cavities can, under good hygienic conditions, be cured.

4. Very bad cases with large cavities, hectic fever, and night sweats, are not suited to tuberculin treatment.

5. Skin tuberculosis, as scrophuladerma or skin ulcerations are rapidly healed with tuberculin.

6. Certain forms of bone and joint tuberculosis, also gland tuberculosis, are rapidly cured with tuberculin alone or with the help of surgical interference.

7. Tuberculin is a dangerous material unless it is given in small doses in the beginning.

8. Small doses of tuberculin alone will not produce recovery of tuberculosis.

9. The Egyptian climate is well adapted for the treatment of tuberculosis.

10. The clinical treatment of lung tuberculosis with tuberculin is indicated only in light cases, in more severe cases the treatment must be more regular and persistent.

The authors lay much stress upon the importance of climate and hygienic influences in bringing about good results.

TRANSLATIONS.

IN CHARGE OF M. B. WERNER, M. D., AND W. A. N. DORLAND, M. D.

A CASE OF PHOSPHOROUS POISONING.

Dr. C. Seidle,Köningsberg, Prussia, reports a woman who, being pregnant, dissolved the heads of matches in water, and drank the solution with a view of producing abortion. The dose was taken on the evening of Oct. 28th. On the morning of the 29th, she was attacked with violent vomiting and complete loss of appetite and was unable to take anything but water until her death, which occured on Nov. 3rd. Having, on that day given birth to dead twins, she died suddenly during the expulsion of the second placenta.

An autopsy revealed a general hemorrhagic condition of the mucous and serous membranes, which were in many places emphysematous, the kidneys also showed hemorrhagic spots, and the pelvis was filled with coagulated blood; the bladder was empty; the uterus measured 21 cm. long, 15 cm. wide, and 6 cm. thick, was of a yellowish color except in places where hemorrhages had taken place. The liver was hard, light yellow in color, containing a moderate amount of blood; the gall bladder contained about a teaspoonful of of thin blackish-yellow bile. The mucous membrane of the small and large intestines, and pancreas were covered with hemorrhagic spots.

The thoracic cavity also showed many hemorrhagic changes. The pericardium was covered by numerous petechial surgillations; beneath the endocardium, especially near the valves, free hemorrhages had taken place. The same condition existed in the pleural cavity. The mucous membrane of the larynx and œsophagus were light yellow and hung in shreds. The brain was normal in appearance and no hemorrhages could be found in its membranes.

The points of peculiar interest in this case were the following:

The mother of the patient acknowledged that about one hundred matches had been used for the purpose, and that, in spite of the violent vomiting and loss of appetite, the patient worked until the 31st of October. The evening of that day she walked to the home of her mother, who lived in the same village.

The destruction of the vascular tissues, in particular, took place so rapidly that any pressure upon the integument was followed almost immediately by surgillations.

Some hours before death a severe form of tachycardia set in, pulse 130 to 140 per minute, the temperature remained normal. No microscopical changes could be demonstrated in the nerve tissues.

Another point of interest was the prompt interchange of the poison between the maternal and fetal circulation.

This method of inducing abortion seems to be confined to the eastern portion of Prussia.—*Vierteljahr fur gericht Med.* bund VI. heft 49-3. W.

'PORRO' FOR OSTEOMALACIA IN THE PREGNANT—RECOVERY.

A. P. Dekanski reports the patient, a multipara in the fourth pregnancy. The latter months of her second pregnancy had been accompanied by severe pains in the pelvic bones which ceased after completion of labor, but returned at the beginning of the third pregnancy; this condition made it necessary for her to remain in bed the greater part of that period. After labor the pains disappeared as before. The fourth pregnancy ushered in symptoms of greater gravity.

A careful examination disclosed the following:

The symphises approaching each other, formed a peaked-like projection. The rami of the pubis assumed a horizontal position parallel to one another, making it difficult for the examining finger to pass. The tuberosities of the Ischium were directed somewhat outward. The promontory of the sacrum could scarcely be reached. Pressure on the pelvic bone was painful. Pelvic measurements between the anterior spinous processes, 22 cm., between the crests, 24½ cm.; external conjugate, 18½ cm.; diagonal conjugate, about 12 cm.; between the posterior spinous processes, 7 cm.; between the trochanters, 21½ cm. The uterus enlarged to about five months pregnancy. The patient miscarried soon after her admission to the hospital. The placenta however was not expelled and it was impossible to resort to manual means. The day following the labor, nature still failing in the expulsion of the placenta and the patient showing increased temperature, Dekanski concluded to operate.

He removed the entire uterus, ligated its ligaments. After removal he fixed the stump in the lower angle of the wound with sutures. The pains in the pelvic bones ceased on the fourth day after operation. Two and a half months after the operation there was but little tenderness left in the pelvic bones, the patient discarding her crutches and using a cane. Three weeks later the patient discarded her cane, and in nine and a half months the pelvic bones had entirely hardened and the pain had entirely disappeared.—*Memorabilien*, heft 7, Sept. 1893.

W.

ABSTRACTS.

A CASE OF PUERPERAL ECLAMPSIA.

Dr. Ball reports (*N. Y. Med. Jour.*) a case of eclampsia at eight months and a half of pregnancy, and remarks upon the use of lithia water in the after treatment.

Mrs. M., a multipara, came into my hands during the latter part of April, 1890, for care during her approaching confinement, her regular physician being necessarily absent.

She was a large, fleshy woman, and inclined to take on adipose tissue rapidly. She had had some difficulty in her first confinement four years before, but since then had remained in good health. The case came into my hands at the beginning of the eighth month, the patient complaining of swelling of the feet and ankles and some headache.

I at once tested the urine and found it in about half the usual quantity, and albumin about a fifth per cent.

She was at once placed upon the usual prophylactic measures, with strict admonition concerning diet, consisting chiefly of milk. The urine was daily tested, and, in spite of keeping the system depleted by means of cream of tartar and petassii acetas, twenty grains every six hours, for its diuretic and cathartic action, also Epsom salts; the urine remained small in quantity with albumin increasing.

Seeing these spmptoms continue, the question arose as to the advisability of inducing labor at once, as the child was known to be alive.

Finally, in accordance with the conservatism of most authorities of the day, since no actual convulsion had occurred, although I anticipated an outbreak at any moment, I decided to await Nature's developments.

Just two weeks from the time I first saw the case, at eight months and a half, I was hurriedly summoned by the husband at 6 A. M., who stated that his "wife was dying."

I rushed into her room and found her in a severe convulsion. As I entered she exclaimed, "Oh, my head!" I at once injected hypodermically a quarter of a grain of morphine with one one-hundred-and twentieth of a grain of atropine. No effect was produced except a transitory lessening of the convulsions, but they continued to come and go.

I at once summoned a brother medical officer in consultation, meanwhile attempting to control the spasms with chloroform. On his arrival we agreed that if venesection did not stop then, premature delivery would be necessary. An attempt to find the median basilic vein proved utterly futile, owing to the enormous quantity of fatty tissue lying over these veins. Seeing this, the spasms increasing in violence and frequency, a fatal result to both mother and child was feared. Chloral, twenty-five grains, and bromide of potassium, forty grains, were now given by enema. Venesection was abandoned and Barnes's rubber dilators, beginning with the medium size, were inserted into the os uteri successively and rëtained about ten minutes each. These "dilators" were filled with cold water by means of an ordinary Davidson bulb syringe attached to their tubes.

In half an hour the dilatation was complete. The forceps was easily applied and a large female child was extracted. Of course, it had been destroyed by the violence of the convulsions, During this whole time the woman was wholly unconscious and remained so for thirty-six hours afterward.

Just here I may add, in speaking of venesection above, that when it was found impossible in the arm, recourse was had to four large wet cups directly over the kidneys. Ordinary glasses were used and about a pint of blood was extracted.

This undoubtedly lessened the frequency of the attacks for the time, during which time the dilatation was accomplished.

After emptying the uterus, contraction took place, so that very little blood was lost. Free action of skin was encouraged by the application of hot bottles, etc. Urine removed by catheter was small in quantity, very dark, and heavily laden with albumin—three quarters per cent.

No recurrence of the convulsions took place, though the patient remained drowsy and semi-conscious only for the next twenty-four hours. Copious antiseptic douches, very hot, were used daily thereafter for three weeks. Temperature did not exceed 100°. Diet was limited to hot milk with the free use of water. The urine was accurately tested daily as to quality and quantity. The albumin at delivery was a half per cent. with granular casts. The estimated urea in twenty-four hours for several days was only two hundred and fifty grains. As a result, uræmic symptoms continuing, the patient was put upon Buffalo lithia water *ad libitum*; no other water allowed. About three quarts were drunk daily at first. The urine increased in quantity by next day, color improved, quantity of urea increased to three hundred grains. Head symptoms improved. No medicine was given except to keep the bowels open. This lithia water was depended upon wholly in increasing quantities. At the end of six weeks the patient was in good condition and her urinary functions were almost normal. She then decided to go off for a visit to a neighboring public resort, in order to try the effect of a chalybeate water said to have proved excellent in kidney troubles.

One week's sojourn there produced such discomfort, constant headache, puffing around the ankles, and general malaise that she returned. Examination showed that the urine was only thirty-two ounces in twenty-four hours: albumin, one quarter per cent; some casts; urea, two hundred and sixty grains.

The patient was placed upon the former treatment, with immediate improvement in every way. The lithia water was gradually increased until urea showed five hundred grains in twenty-four hours, and seventy-five to eighty ounces of water passed daily.

The patient then rapidly convalesced and made a complete recovery.

The patient being of a heavy, plethoric type, I believe the chalybeate water was decidedly injurious.

The marked benefit as a result of the natural lithia water shows the power of this drug, in its natural state of solution, in dissolving the rapidly accumlating urea out of the minute uriniferous tubules, thus removing this vital poison, always so prominently existing in these cases.

No more trying conditions ever confront the attending physician than these cases of ante-partum, intra-partum, or post-partum eclampsia. In the first two conditions we have to deal with the problem of two lives. Given the conditions of a living child, at seven to eight months and a half, with the mother showing marked symptoms of impending eclampsia, shall we procrastinate, temporize by the various means usually adopted, till finally we are forced to act after the explosion has occurred, and probably extract a still-born fœtus?

In the above-reported case might I not have saved one life by interfering sooner? This child was certainly viable soon after the case came into my hands.

The discussion of Dr. Green's interesting paper on Eclampsia, in the *American Journal of Obstetrics* for July, 1893, at the meeting of the American Gynecological Society, shows a marked difference of opinion among medical men as to our capability to prevent entirely the full development of puerperal eclampsia when we have had charge of the case early.

I certainly believe with those who realize our total inability to prevent this climax, no matter how watchful we are in the early stages of many cases.

Of course, up to the seventh month the advisability of every conservative measure will hardly be questioned by any one.

I have seen nothing in the journals concerning the free and persistent use of lithia water in the very earliest stages of these cases.

I believe, if this were more generally adopted, many of them would escape the further development of the insufficient renal function.

My only reason for presenting this case is to call attention to its beneficial effects.

THE ETIOLOGY OF CANCER.

Professor Duplay and M. Cazin discuss in the *Semaine Médicale,* some of the more recent assertions made in various quarters on the etiology of cancer. In connection with the possibility of a more or less direct transmissibility of cancer from one member of a household to another, or among the inhabitants of a locality, the evidence is very meagre. Arnaudet asserted the frequency of cancer in the Canton of Coremeilles, where it exists in somewhat epidemic form and localized to certain districts. Arnaudet suggested that the disease was conveyed through drinking water, and especially cider made with contaminated water or by defective sanitation of dwellings. Professor Brono's subsequent investigations, however, failed to afford any corroboration. Fiessinger traced four cases of cancer in three houses to contamination, apparently with the dressings from a case of scirrhus of the breast. Guelliot and Fabre collected instances of "house-epidemics." In this connection Metchnikoff's hypothesis must be borne in mind that cancerous neoplasms might possibly belong to the group of miasmatic diseases capable of being propagated by spores formed outside the organism.

It has long been known that cancer is easily disseminated throughout the organism by cancerous particles detached from the primary growth and deposited in the various organs and tissues. Secondly, experiments on the human subject have shown that the inoculation of cancer to patients already suffering from the disease is not necessarily followed by positive results, though some have been observed.

Several investigators have recently claimed to have successfully inoculated human cancer to rats and mice, but a long series of prior attempts were apparently unsuccessful, and the more recent ones are open to doubt. In the inoculation from one animal to another of the same species negative results were obtained by numerous investigators, but on the other hand a few positive ones have been arrived at, viz., by Goujon (epithelioma in guinea-pig), Klencke (melanotic carcinoma in the horse), Wehr (carcinoma in the dog), Hanau (epithelioma in the rat), Eiselsberg (filio-sarcoma in rat), and Morau (epithelioma in mice). Hanau's well-known results are very striking.

Quite recently Morau has presented to the Academy of Sciences the following conclusions arrived at in his continued experiments.

1. White mouse epithelioma is inoculable from one animal to another of the same species.

2. Hereditary influences play a very important part in the development of these tumors.

3. Secondary growths are apt to form in various parts of the body, the development of these metastatic formations being favored by an injury to the tissues or organs.

4. Gestation produces the same effect as traumatism.

5. Certain toxines are produced in the substance of these tumors. They are absorbed into the system giving rise to general cachexia.

6. These tumors apparently loose their virulence by successive transmission through a series of animals of the same species.

7. So long as the skin is unbroken these tumors are apparently free from bacteria.

8. Picric acid seems to exert a favorable influence on these tumors by coagulating the protoplasm of the cells. For this purpose it must be brought directly into contact with the pathogenic cells (interstitial injections).—*Jour. Cuban and Genito Urin. Dis.*

THE LIBRARY TABLE.

BOOK REVIEWS.

Text Book of Normal Histology, including an account of the development of the tissues and of the organs, by George A. Piersol, M. D., with four hundred and nine illustrations, of which three hundred and fifty-eight are from original drawings by the author. Philadelphia. J. B. Lippincott Co., 1893. 429 pp.

It is not every day that the reviewer of science text books has the pleasure of commenting upon a work approaching so near perfection as that now under consideration. Dr. Piersol, for many years assistant to, and finally successor of the late Professor Richardson in the Histological Laboratory of the University of Pennsylvania, and afterward of our lamented Leidy as Professor of Anatomy, brings to his work a knowledge based upon long practical observation both here and in the best known laboratories of Europe. The portfolio of histologic photomicrographs issued by him several years ago, gave ample testimony to the delicacy of his technique, and the works of several local authors have long born witness in their illustrations to the character of his work with the pencil and camera lucida; while those cognizant of the importance of neatness and method in the various steps of the preparation, staining and microtomy of tissues, could require no greater assurance as to the author's fitness for this work, than could have been had at almost any time during the past decade by a visit to his private work room.

The book on Normal Histology now before us, is but the natural and adequate fruition of a training and aptitude enjoyed by few. It is a pleasure to open a text book on a microscopic science which enters at once upon the subject proper without the traditional chapter on the structure and use of the microscope, an instrument now familiar in every household. A similar sense of relief is experienced in finding the details of staining, embedding, sectioning, etc., relegated to the back of the book, accompanied by a discriminating choice of methods and reagents.

The book is what it claims to be, a treatise on normal histology and the subject is handled with perspicuity, combined with an up to date thoroughness which leaves little to be desired. We find nerve histology, for example, illustrated with new and fresh drawings, showing the results of the latest discoveries based upon the Golgi gold and silver method, from the author's own pencil or that of Ciacco, Lenhossek and other modern investigators, rather than by the time honored cuts of Stricker, Henle, Krause, Kuhne, etc. We are pleased to note the inclusion of discoveries by local investigators, as for example the intra-fibrilar capillaries of the heart muscle described by Meigs. The text is enlivened by the use of heavy faced type for the more important names and phrases, and throughout compares favorably with the beautiful press work of the books by Lang, Korschelt, Hertwig, and others, issued within the last year or two by Macmillans. There are a number of minor points open to criticism, chief among which is the entire absence of bibliographic references, so useful to all who wish for something more than dogmatic statement and who desire to refer to original sources, especially in matters of dispute.

We cannot avoid feeling that the value of the book would have been greatly increased, had the author made his treatment more comparative and brought to bear the many apt illustrations to be drawn from recent investigations in the histology of the invertebrates and lower animals. The reader is given no inkling of the diversity of opinion regarding the phagocytes of Metschnikoff, or the origin and nature of the mesoderm, nor is any suspicion aroused of the fight that is being waged about the nucleus by students of the cell, from the standpoint of physiology and heredity. That most important and wonderful of all cells, the ovum, is passed over without a suggestion that the animal ovicell varies greatly in its internal arrangement and external environment in the different animal types; while the normal histology of the imperfect organs of embryonal life is touched upon in a manner which scarcely realizes the hopes held out by the subtitle of the book.

To be sure the work is intended primarily as a text book for medical students, but even they would not be harmed by being impressed with the value of comparison in connection with observation and the suggestion now and then that all normal histology is not human or mammalian histology nor the histology of adult structures.

Manual of Bacteriology, for Practitioners and Students with especial reference to practical Methods, by Dr. S. L. Schenk. Translated from the German by W. R. Dawson, M. D. with 100 illustration partly colored. London, and New York; Longman's, Green, and Co., 1893.

The rather harsh criticisms of the original editor of Dr. Schenk's book in the Vienna *Medical Journal*, and the more recent review in the Dublin *Medical Journal*, smack strongly of personal feeling, directed on the one hand at the author, Professor extraodinary in the University of Vienna, and on the other, at Dr. Dawson, Travelling Prizeman of the University of Dublin. Viewed from the standpoint of the ideal, the book undoubtedly has its faults; few treatises above criticism are to be found, especially among text books; but compared with existing books on bacteriology, Dr. Schenk's is a valuable contribution, and the peer of almost any in the long list of publications on the subject.

For the busy practitioner and student it strongly commends itself, inasmuch as the pages are not loaded down with historic or polemic detail, but the bacteriological analyses of air, water, earth, articles of diet, pus, organs and cavities of the body, feces and urine, nasal and other secretions, and the blood are treated of systematically and in a way that presents the results and methods of investigation in the respective fields without waste of space or the reader's patience. That the translator has not altogether escaped the obscurity, inherent in the language of the original, is evident now and then, but in no wise affects the intrinsic value of the book.

The fact that the publishers have left nothing undone to make this a beautiful example of modern book-making is evident in the large clear type, wide margins, fine paper, and excellent illustration and adds largely to the value of the book. To those who have no inclination for the exhaustive presentation of the subject given by Sternberg in his recent, voluminous treatise, but who wish to have it placed before them, as from an intelligent and experienced teacher to his pupils, we would commend this work.

Les Troubles du Language Chez Les Alienes. Par J. Seglas, Medecin Suppleant de la Salpetriere, etc., etc., with 17 figs. in the text. 299 pp. Paris. J. Rueff et Cie., publishers, 1892.

This elegant little work, which forms a number of the Charcot-Debove library, considers the subject of the written and spoken disturbances of speech of the insane, and is the first complete contribution to the study of this subject. In the year 1891, the writer gave a number of lectures on this subject at the Salpetriere and these form the skeleton of this work. It is a welcome addition to our knowledge of this subject, for without understanding the various disturbances of speech in the insane, many of the symptoms will pass unperceived, or be misinterpreted, and hence many precious indications for diagnosis, prognosis and treatment may be neglected. Again, if one but remember that all insane persons, excepting slight variations from social medium, education, etc., of all times and countries express themselves in the same manner in their delirium, one will see the importance of familiarizing oneself with their language. After a few preliminary chapters on the division and general plan of the subject, the development of language in idiots and imbeciles, he enters into the consideration of the disturbances of spoken language, with its various abnormal modifications and illustrates it with examples and cuts. The second portion treats of the disturbances of written language, which is carefully and comprehensively traced and studied in its many details with admirable industry and breadth of experience. The third and final section is consecrated to the abnormalities of gestural language, mimic language, and its relation to intellectual disturbances. The book is one which fills a gap in our knowledge of this subject, and which will be the source of much instruction to those working in this department.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE KANSAS CITY MEDICAL INDEX

for December. Dr. C. F. Wainwright contributes a paper on the

Early Diagnosis of Carcinoma of the Stomach.

The author believes that in the near future, by the help of modern means of diagnosis of diseases of this organ, and assistance of able surgeons, the profession may look forward with some degree of hope to rescuing a fair percentage of such cases as may be made the subject of early study and treatment. The author advises the chemical examination of the contents of the stomach as confirmatory evidence of the disease. The emptying of the stomach should take place after the administration of a test meal, the time depending entirely on the nature of the meal. The author prefers the test meal of Ewald as the simplest and best. This consists of one water roll, weight 35gr. and a cup of tea or water; this meal can be taken from the stomach one hour afterwards in a fluid form, while the trial meal of Riegel and others, consisting of beef-broth and bread, is much more complex and cannot be removed in fluid form for several hours.

Dr. Lewis Schooler discusses

Appendicitis in its Relationship to Life Insurance.

The author believes that if the present accepted views are correct in regard to one attack of appendicitis predisposing to another and finally to a state of chronic inflammation of the organ, then all persons who have been the subjects of this disease and have not undergone an operation for its relief should be rejected by the examiner to whom the history is given. The time which must elapse after an attack before the risk may be considered a safe one can only be determined by the observation of a large number of cases treated by the expectant method without surgical interference. Much information would be gained if cases treated by the expectant method were promptly reported. The author states that no case with suspicion of chronic appendicitis should be accepted. But where there is a history of a single attack without recurrence within a space of twelve months he would be inclined to class the applicant among the desirable risks. Where there have been two or more attacks within one year the risk should not be accepted until at least two years have elapsed without a recurrence. Where there have been repeated attacks covering two or more years the risk should be rejected.

Some Points in Regard to Colotomy

is the title of a paper by Dr. Emory Lanphear. The author states that, under modern antiseptic methods, inguinal colotomy is always to be preferred to the lumbar variety. The classical method of performing the operation by bringing up the bowel, stitching it into the wound and opening the side of the gut he does not consider a good method of procedure and would adopt it only when certain that a restoration of the natural channel at some future time might be impossible. The operation he prefers is complete division of the gut, inversion and dropping of the lower end and suture of the upper to the margins of the wound. The objection to colotomy that the subsequent life of the patient is a miserable one is not sustained by his experience; he has found that the general condition improves greatly and even if the malignant disease cannot be removed the life of the subject is prolonged for a year or more, the cancer developing much more slowly than before colotomy; and the patient is free from the pain and irritation consequent to the passage of fæces over the diseased area.

Dr. T. N. Taylor discusses

The Modern or Mechanical Treatment of Trachoma.

After reviewing the various methods of treatment, the author comes to the conclusion that the treatment by systematic expression gives the best results. He has found the Knapp roller forceps very satisfactory for the central portion of the lids, but at the angles the Prince instrument is more manageable. However, the mechanical devise is by no means so important as a determination on the part of the operator to bring away as completely as may be the whole contents of the follicles. All is complete after the surfaces are wiped and the bleeding, which is rather favorable than otherwise, has ceased. The lids at once swell to several times their natural thickness and on the following day may show a general ecchymosis. No treatment beyond careful cleansing is necessary in the majority of instances, but at times the reaction may require the application of iced cloths for twelve to thirty-six hours, and their use is always grateful to the patient. After a few days the application of weak solutions of silver, glycerate of tannin or even sulphate of copper crystals may be resumed with benefit in some cases. A variable time is required before the roughened membrane becomes smooth, but a reappearance of granulations is extremely rare. From two to six weeks suffices for the cure of ordinary uncomplicated cases where as formerly six to eighteen months was the average expectancy.

Dr. L. Reynolds reports

A Case of Ruptured Uterus.

The author was called in consultation after the accident happened and is therefore unable to say whether the case was one of spontaneous occurence, or was assisted artificially. Some of the conditions present were favorable for its production without artificial aid, such as a small pelvis and an unsually large child, together with the age of the patient (26 years). No ergot had been given. There was also present a possible artificial cause such as the repeated application and slipping of Naegeli's forceps, previous to the author's arrival. On the outhor's arrival the head of the child was found presenting but not engaged. On re-examination by the attending physician the head was found to have receded. The patient was anæsthetized and the child extracted with forceps. The placenta not being expelled, the author introduced his hand within the uterus to extract it and discovered a complete longitudinal rent extending from the cervix upwards beyond the center of the uterus. A proposition to perform an immediate laparotomy was opposed by the attendant on account of the necessary intervention of a priest whom it required a day or two to get. "By the time the priest arrived septic symptoms had set in and the patient was left to the inevitable. Death occurred on the third day." Until the removal of the placenta, rupture had not been suspected, and except for the reporter's careful examination at the third stage of labor its occurrence might have been entirely overlooked and the result attributed to some post puerperal change. From his observation in this case the reporter believes that a large percentage of the cases of rupture of the uterus are never reconjnized.

[This case forcibly emphasizes the dangers of delay, which in this case one is inclined to call criminal.—Ed.]

The remaining papers in this issue are: the "Report of an Operation for Glioma" by Dr. G. R. Rucker; "Legal Injustice to the Insane" by Dr. B. D. Eastman, and "The Treatment of Appendicitis" by Dr. John B. Deaver in which the author reiterates the opinions expressed in a former paper, a review of which was published in The Medical and Surgical Reporter for October 7, 1893, page 579.

THE UNIVERSITY MEDICAL MAGAZINE

for December. Dr. Harrison Allen discusses

The Etiology of Fracture of the Lower End of the Radius.

The author concludes that the generally accepted proposition that the accident is the result of a fall upon the palm or ball of the thumb is not satisfactory and is in part erroneous. He believes that when the arm is thrown in front of the body, as in the act of falling, the impress is received upon the part of the palm answering to the little finger, and not upon the palm as whole, or upon the ball of the thumb. What takes place can be formulated thus: As a result of violent contact of the hypothenar portion of the palm against the ground, the hand is first pressed upward (not backward)—that is to say, in a direction as though the forces were exerted on the hypothenar side of the palm and were to traverse the palm to the thenar side and the direction is upward since the hand is midway between pronation and supination. Secondly, the force of the impact is measurably transferred to the center of the palm obliquely inward and backward. The act of a violent and unexpected fall throws the entire weight of the body upon the unrelieved hand, with the result of wrenching the hand inward and upward from the hypothenar side and impacting the radius against the carpus. In this fashion are created all the several lines of the lesion.

The Operative Treatment of Knee-joint Disease

is the title of a paper contributed by Dr. De Forest Willard. After duly considering the various operative measures, the author comes to the following conclusions :

1. Mechanical treatment by rest, fixation and the use of crutches, either axillary, perineal, or ischiatic, is absolutely essential both before and after operation.

2. In children under 12 years of age conservative measures should be carried to the extreme, and all operative procedures should tend to non-interference of the epiphyseal line for as long a period as possible, in order to assist growth of the limb. In these young cases, therefore, tenotomy with subsequent fixation should be the primary procedure, to be followed by erasion when necessary, and by excision only when life is absolutely threatened.

3. From 12 to 15 years of age conservatism should still be the rule, although the dangers from a shortened limb subsequent to operation are not so serious after growth has been completed. In adults operative treatment should be early and more radical in character, erasion still being preferable to excision, except in very degenerated cases.

4. Amputation should be employed in children only as a "dernier resort;" in adults with extensive disease it is often a wise procedure.

5. The introduction of the anti-bacillary substances, both extra- and intra-articular, offers hope of retardation in the growth of bacilli, but as yet the procedure is in the experimental stage.

6. After the subsidence of all inflammatory symptoms the late deformity should be overcome :

a. By tenotomy, with forcible replacement.
b. By excision ; rarely by osteotomy.

Dr. William S. Carter contributes a paper

The Globulicidal Action of Blood-Serum,

detailing a number of experiments, as the result of which he comes to the following conclusions: Of the different blood serums used in these experiments, the most toxic and the most actively globulicidal is human serum injected into rabbits. When injected rapidly into the veins, it causes death in a very few minutes, the corpuscles being diminished to one-half or one-third their normal quantity; when injected slowly, death comes on much later, the corpuscles being reduced to one-fifth their normal. Upon dogs human serum has neither a toxic nor globulicidal action. With frogs there is a decided globulicidal and toxic effect.

Dogs' serum is toxic when injected rapidly into the veins of rabbits; when injected slowly, in some cases death comes on with slight diminution of red blood-corpuscles, while, in others recovery occurs even after the use of 30 cc., and there is but slight alteration in the number of corpuscles.

The serum of the horse is neither toxic nor distinctly globulicidal, when injected into rabbits.

The serum of the cat does not appear to be toxic nor globulicidal when injected into the rabbit.

Serum of the sheep is neither toxic nor globulicidal for cats.

Heat destroys both the toxic and globulicidal action, but these properties are not lost by standing in a cool place for one week.

There is no great alteration in the number of leucocytes, except that they seem to be reduced in number when the red blood-corpuscles are destroyed.

When human or canine serum is injected into rabbit the proportion of lymphocytes seems to be increased, while the multinuclear, or oldest of the leucocytes, are correspondingly diminshed.

When the serum of the horse was injected into the rabbit there was a slight diminution of lymphocytes, while the multinuclear form was more abundant.

From the fact that the serum of the dog is toxic for rabbits, without having any decided globulicidal effect, and also that human serum injected rapidly into rabbits causes death in a few minutes, before the corpuscles are reduced below one-third their normal, while the slow injection causes a reduction to one-fifth of the normal number before death, it seems probable that the toxicity is not dependent upon the globulicidal action, and indicates a multiplicity of poisonous substances in the serum. The fact that heating destroys these actions indicates their albuminous nature.

The experiments made by the author show that the corpuscles of an animal are not destroyed by *any* foreign serum. The only serums exerting a toxic or globulicidal action were those of flesh-eating animals—man and dog—while serum from man had no effect on the dog. But serum of the cat had no effect upon the rabbit.

In those cases in which death occurred from the injection of human or canine serum, a cardiac thrombus was never found, but the ventricles were distended with fluid blood, often containing dark, non-adherent and very soft clots—such as form at the agonic period of death.

Dr. James Hendrie Lloyd contributes a paper on "Pacchymeningitis and Myelitis from Pott's Disease, and Septic Neuritis of the Cauda Equina from a Bed-sore over the Sacrum." The author believes that the essential disease-process that involves the cord and its membranes in caries of the spine is an actively infectious one, causing first pacchymeningitis, and later a meningo-myelitis, and that bone pressure as an active cause in the impairment and destruction of the cord, is of strictly secondary importance, and in the majority of cases of no importance whatever.

Dr. Charles A. Oliver reports "The Clinical History of a Case of Spindle-celled Sarcoma of the Chorioid, with a Study of the Microscopic Condition of the Growth."

The remaining papers in this issue are: the report of a case of "Congenital Absence of the Vaginal Cervix" by Dr. C. B. Penrose; and the report of a case of "Symmetrical Hemorrhagic Infarct of Both Lungs" by Dr. Frank Massey.

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

MEDICINE.

The Clinical Course, Diagnosis and Structure of Duct Cancers or Villous Carcinomas of the Breast.

Anthony Bowlby has contributed a valuable paper upon this subject, and his conclusions are as follows:

"1. In a considerable proportion of the cases there is at some time a discharge of fluid from the nipple, and this discharge may precede the development of any tumor perceptible to the patient for a period of even several years. The growths are, however, not associated with so-called eczema of the nipple, or Paget's disease.

"2. The patients are mostly over middle-age.

"3. The axillary glands are not usually affected.

"4. The tumors are not of very rapid growth.

"5. Neither the nipple nor the skin is usually retracted, but the growths are commonly situated near the nipple.

"6. The tumors are occasionally multiple in the same breast, and are firm and elastic, or else shotty and knotted to the touch rather than hard and nodular like a scirrhous carcinoma.

"7. On section, the growths are seen to be encysted, and are generally darkly blood-stained, soft and friable. Sometimes they are of a lighter color, and grayish and granular on the surface. Some of the cysts are almost filled with solid growths, others contain little but blood-clot and serum. It can often be plainly seen with the naked eye that some of the cysts are formed by dilated ducts, and the solid growth can often be seen springing from the lining membrane of the latter. The cysts and the growth may be situated either in the gland or in the surrounding fat. Occasionally, the tumor may protrude through one of the dilated ducts on the summit of the nipple.

"8. The tumors are liable to recur locally, but are not nearly so prone to affect the lymphatic glands or to disseminate as are the spheroidal-celled scirrhous carcinomas. If attention be paid to these points, I think no difficulty will be found in diagnosing these tumors from scirrhous carcinomas. Sometimes there is difficulty in separating them clinically from the cystic sarcomas.

"With regard to this the following points are worthy of attention: Duct cancers occur frequently in old women, in whom the growth of cystic sarcoma is relatively uncommon; they do not attain so large a size, nor do they grow so rapidly as do the cystic sarcomas; the cysts they form are usually much smaller than are the cysts in the latter class of growth; the discharge from the nipple is usually much more blood-stained."—*London Lancet.*

Inoculation of Measles.

Dr. Hugh Thompson, of Glasgow, describes nine cases in which he had inoculated children with fresh serum taken from blisters on patients suffering from measles. He believes that four were rendered immune, and that in two the experiment failed. At the point of insertion of the serum slight measly looking patches appeared in from one to two days, and lasted for two or three days; accompanied with slight catarrhal symptoms. The serum is taken from small blisters no larger than a measly patch, and used immediately, and inserted by superficial scarifications.—*Pract. and News.*

The Human Nasal Canals as related to Climate and Pulmonary Disease.

Dr. William C. Braislin shows that in negroes the nasal canals are wider, shorter, and less deep than in other races, and thereby less protection is afforded the lungs. The author believes that the African nose, being adapted to a tropical climate, is not suited for the colder climates, and that in this lies the greater susceptibility of the negro to consumption and other diseases depending upon irritating qualities in the atmosphere.—*Science.*

Importance Attached to the Conditions of the Tonsil.

Dr. John W. Farlow calls attention to the prominence given the tonsils by the act of gagging, which forces them forward and toward the median line, cutting off the view of all that lies beyond. Moreover, the difficultry of posterior rhinoscopy and the mystery surrounding the function of the tonsil all unite to direct the physician's attention to these little bodies. The examination of the tonsils should be conducted while they are in repose, so that any changes in the adjoining tissues may be recognized and properly treated. The author shows that the symptoms usually ascribed to large tonsils may likewise be due to other causes (adenoid disease, etc.), and he would have these eliminated before resorting to tonsillotomy.

In conclusion, he presents the following summary:

1. Because the tonsils are easier to see than the nose and post-nasal space, is no sign that they are more important than the latter.
2. Form no estimate of the size of the tonsils unless you see them in repose.
3. Always examine the back teeth and the base of the tongue.
4. In acute follicular disease of the tonsils, look for and treat disease of the other follicular tissue in the throat.
5. Nasal obstruction, cough, and impaired voice are much more likely to be due to nasal

or post-nasal hypertrophy than to tonsillar.

6. The fact that the tonsils are enlarged or diseased should lead us to look for a possible explanation in the parts higher up.

7. Free the nose and post-nasal space in addition to, or instead of, tonsillotomy, if you wish to improve the voice and respiration.—*Boston Medical and Surg. Jour.*

Vaseline in Certain Affection of the Middle Ear.

Dr. Delstonche (*Le Bulletin Medical*, 1893) speaks highly of injections of liquid vaseline in adhesive affections of the ear. He injects it through the Eustachian tube into the tympanic cavity. It is perfectly inocuous, and from an experience extending over several years he finds it of value.

1. To rupture extensive adhesions of the tympanic membrane with the wall of the labyrinth where insufflation of air, etc., are found insufficient. He has had several cases of partial success with forced injections of the liquid vaseline.

2. To clear out mucous accumulations from the tympanum during the course of certain chronic catarrhs. It forces the mucous into the mastoid cells, where it no longer interferes with hearing, or into the pharynx.

3. To diminish the chances of inflammatory reaction after paracentesis of the tympanum, where the matter filling the tympanum is dense or viscid, and will not evacuate itself spontaneously in a satisfactory manner. Here, from its inocuity, it is to be preferred to any other liquid.

4. To open an obstructed Eustachian tube when mucus blocks it and prevents insufflation of air, a few drops of vaseline blown through the catheter will clear it at once. Hence this simple means is always to be tried before dilatation with sounds is attempted.

5. Finally, in acute inflammation of the middle ear, either with or without perforation, especially in purulent otitis complicating influenza, massive injections of liquid vaseline saturated with iodoform render signal service, from their sedative action upon the atrocious pains which often accompany this affection. They also appear to hasten and aid to a favorable termination.

The Administration of Milk by Accurate Dosage.

Patients frequently declare that they cannot take milk. The difficulty, however, is not with the milk, if due care is exercised to obtain a pure article, but is due to the uncertain method of its administration. Very few patients can commence abruptly and take two or more quarts per day, as such quantities are likely to upset the stomach.

The writer has had prepared a graduated glass for the administration of milk, indicating the number of tablespoonfuls from one to twenty, as well as the hours for taking the milk in the morning, afternoon, and evening, which he calls a "milk-tumbler." Such a tumbler is a great convenience for use in private as well as in attendance on "rest-cure" cases.

The writer has seen very good results follow the proper administration of milk in cases of great irritability of the stomach, chronic dyspeptics, and the like. By commencing at seven o'clock in the morning and stopping at ten o'clock at night we have eleven times for giving the milk, so that the quantity of milk daily taken can easily be reckoned.

Sometimes it is well, in commencing the milk course, to allow the patient three simple, easily-digested meals of selected articles a day, in conjunction with small but gradually increasing doses of milk. As the quantity taken reaches two or more quarts daily it is well to omit one or more of the meals, until the absolute milk diet is finally obtained.

When milk is given with a view to affording the digestive organs absolute rest, then milk only should be permitted for at least five weeks, or longer, according to the case and the character of the symptoms. Even after recovery it is always well to recommend the patient to take at least a quart of milk daily for an indefinite time. In the great majority of cases the milk will prove very grateful to the patient subsequent to undergoing this treatment.—Thomas G. Morton, M. D. in *Food*.

Complications of Vaccination.

Epstein reports two cases of purpura and fourteen of erythema developed in the course of four hundred and thirty vaccinations. The cases of purpura occurred in children 12 and 4 months old, respectively, the hemorrhage spots being of varying size, appearing four days after vaccination, gradually disappearing in the course of a week, and preceded by agitation, insomnia, and fever. In the first child, which was rachitic, the spots occupied exclusively the left superior extremity, especially its entensor surface; in the second case they were distributed upon the extremities and the trunk. In both the vaccination proved successful, the vesicles at no time, however, being hemorrhagic. Five days after the attack of purpura measles developed in the first child, the eruption being quite distinct from the petechiæ. Of the fourteen cases of erythema, the eruption appeared in one on the fourth day, in one on fifth day, in one on the sixth day, in five on the seventh day, in two on the eighth day, in three on the ninth day, in one on the tenth day, and in one on the eleventh day after vaccination. The distribution of the eruption followed no particular course. Most often it appeared about the inflammatory areola of the vesicle and, at the same time, upon the extensor surfaces of the arm and forearm; often it appeared on the postero-external aspect of the thighs, upon the thorax, and upon the sacrum. The erythema resembled the exanthema of measles. It developed in the course of from twenty-four to seventy-two hours, and persisted, ordinarily, for from six to eight days.—*Jahrbuch fur Kinderheilkunde*, B. xxxv, p. 442, 1893.—*Universal Med. Jour.*

The Effect on Sucklings of Purgatives Administered to the Mother.

Observations were made on forty-two cases, and the only conclusions that could be drawn were:

(1) Sulphate of magnesia administered to the mother frequently causes looseness in the sucking child; and

(2) Senna, cascara sagrada, and aloes rarely affect the child's bowels when administered to the mother.—*Ex.*

Prize of the American Neurological Association.

The American Neurological Association offers a prize of $200 for the best essay on any subject connected with Neurological Science.

This competition is open to physicians who are legal residents of states in North and South America.

Essays must be sent to the Secretary of the Association on or before the first day of May 1894.

Each essay shall be accompanied by a sealed envelope containing the name and addresses of the author, and bearing on the outside a motto, which shall also be inscribed upon the essay.

Essays shall be type-written, in either the English or French Languages, and with the pages securely fastened.

The Council of the Association reserves the right to reject any or all essays judged unworthy of the award.

Each essay must exhibit original research, and none will be accepted that has previously been published.

GRÆME M. HAMMOND M.D., *Secretary.*

58 West 45th Street, New York City.

What Benefit can Ear Patients Derive from Nasal Treatment?

H. Gradle (*Jour. of Amer. Med. Assoc.*) arrives at the following conclusions:

1. Acute suppurative inflammation of the middle ear, if not treated, has a tendency to become chronic, the tendency increasing with the age of the patient.

2. Chronic suppuration of the middle ear rarely heals without ear treatment. Neither acute nor chronic purulent ostitis are influenced by nasal treatment, but the liability to relapses after their cure is decidedly lessened by the removal of naso-pharyngeal anomalies.

3. Acute catarrh of the middle ear will generally terminate in complete recovery under aural treatment and sometimes even without it, provided there are no persistent nasal or pharyngeal lesions. But when these are present the disease is more likely to become chronic in spite of aural treatment, and in many instances can either not be cured, or, if improved, will speedily relapse unless the normal state of the nose and throat is restored.

4. Proliferating or adhesive disease of the middle ear is the consequence of retro-nasal catarrh, and its course is determined by the course of the disorder causing it. Aural treatment alone is practically useless in this form of trouble, while nasal treatment, if successful so far as the catarrh is concerned, will also arrest the ear-disease. The restitution of hearing, however, depends on the length of time the disease has lasted, and is often aided by ear treatment after the cure of the retro-nasal catarrh.

Engelman (R.) on a Contribution to the Study of the Accidents of Vaccination.

Conclusions:

1. Variola is communicable as an air-borne and air-exit contagium.

2. Its specific virus has not been isolated.

3. Its identity with vaccinia is undetermined.

4. The failure and non-protective character of vaccination is due to vitiation of the vaccine supply.

5. This vitiation is (1) saprophytic,, annulling the specific quality of the virus, or (2) pathogenic, inflicting injury upon the individual.

6. Consequently such change in the lymph supply is demanded as to exclude a mixed infection.

7. Vaccination confers immunity from smallpox, but not from other (1) synchronous or mixed, or from (2) secondary infections.

8. These secondary contact infections are avoidable.

9. Hence antiseptic methods applied (1) to the present vaccine supply, and (2) to vaccination, will make accidents of vaccination a thing of the past.

10. To procure which end it is desirable, if not necessary, to establish government vaccine stations.—*No. Amer. Pract.*

SURGERY.

Ravogli (A.) on Syphilitic Plaques.

During the last six years Dr. Ravogli has treated 216 cases of syphilis. Of these 116 were early syphilis (secondary stage); 94 late syphilis (tertiary stage); and 6 congenital.

Of the 116 cases of early syphilis mucous plaques were found in 103 cases. Of the late cases (94) mucous plaques were found in 24 cases.

Sex seems to have no influence, although many authors claim that they more frequently affect women.

The frequency with which the different anatomical regions are affected is shown in the following table:

In the secondary period—

Lips	38
Anus	11
Tongue	11
Vulva labia, majora and minora	12
Mouth	6
Tonsils and palate	5
Scrotum	5
Thighs, int. fold	4

Præputium and glands	3
Larynx (vocal cords)	2
Pharynx	1
Hand (interdigital)	1
Foot, between the toes	2
Under the breast	1
Axilla	1
Face	1

In the tertiary period, plaques appeared on the—

Palate	6
Tongue	6
Nostrils	5
Conca auriculæ	2
Lips	2
Scrotum	2
Anus	2

The Treatment of Vulvar Vegetations by Pure Carbolic Acid.

Derville, of Lille (*Jour. de Med. et de Chir. Pratiques*,) treated a case of vulvar vegetations covering both the anus and the vulva, and reaching the size of a man's fist. He cured this enormous growth by local washing with pure carbolic acid. The whole surface of the vegetations was painted with the pure acid; this application was repeated about every fourth or eighth day. The treatment occasioned no pain, but frequently caused erythema, vesiculation, and excoriation of the surrounding parts. This is prevented by the application of vaseline to the healthy skin.—*Therap. Gaz.*

GYNECOLOGY.

Premature Sexual Development in Relation Specially to Ovarian Tumors, with an Illustrative Case of Ovarian Sarcoma in a Child of Seven; Laparotomy; Recovery.

The patient, a girl of seven years, was suffering from a large abdominal tumor. Previous to March she presented no abnormal symptoms, when she was raped by a boy on several occasions. Immediately there was a profuse hemorrhagic discharge from the vagina, which continued almost uninterruptedly until she was admitted to the hospital seven months later. Shortly after the rape the abdomen began to swell, until on her admission she had a tumor about the size of a seven months' pregnancy.

However, this tumor proved to be an ovarian sarcoma, weighing over six pounds. Laparotomy was done, the tumor removed and the child made an uninterrupted recovery.—*Ex.*

ARMY AND NAVY.

U. S. ARMY, FROM DECEMBER 3, 1893, TO DECEMBER 9, 1893.

1st Leiutenant Allen M. Smith, Assistant Surgeon, granted leave of absence for four months, to take effect on or about January 4, 1894.

The leave of absence granted Major Peter J. A. Cleary, Surgeon, on Surgeon's Certificate of disability, is extended four months on Surgeon's certificate of disability, on condition that he report in person to the commanding officer, Army and Navy General Hospital, Hot Springs Ark, on or before December 11, 1893, for treatment therein.

Leave of absence until February 22, 1894, is granted Major John Brooke, Surgeon U. S. Army.

1st Leiut. Benjamin L. TenEyck, Assistant Surgeon, is assigned to station at Fort McIntosh, Texas, for field duty in the Department of Texas.

By direction of the President, the retirement from active service, this date, December 4, 1893, by operation of law of Colonel Charles Page, Assistant Surgeon General, under the provisions of the act of Congress, approved June 30, 1882, is announced.

1st Leiut. Charles Wilcox, Assistant Surgeon, will be relieved from temporary duty, at Angel Island, California, on the arrival there of Major Benjamin F. Pope, Surgeon, and will report in person to the commanding officer, Boise Barracks, Idaho.

1st Leiut. Francis A. Winter, Assistant Surgeon U. S. Army, is relieved from further duty at Fort Wingate, New Mexico, and from temporary duty at Fort Bayard, New Mexico, and will proceed to New Fort Bliss, Texas, and report in person to the commanding officer for duty at that station.

NEWS AND MISCELLANY.

Reduced Rates for the Holidays.

In pursuance of its liberal policy, the Baltimore and Ohio Railroad Company announces that excursion tickets will be sold between all stations on its lines east of the Ohio River during the Christmas and New Year holidays at reduced rates. The tickets will be sold for all trains December 23, 24, 25, 30, 31 and January 1, and will be valid for the return journey on all trains until January 3 inclusive.

Through Cars to New Orleans.

Among the many important improvements in the Baltimore and Ohio Railroad train service is the addition of through pullman Sleeping Cars from New York to New Orleans, via Philadelphia, Baltimore, Washington, and the famous Shenandoah Valley route, passing through Roanoke, Knoxville, Chattanooga and Birmingham. The train leaves New York daily at 5.00 P. M.; Philadelphia, 12th and Market Sts., 7.22 P. M and 24th and Chestnut Sts. 7.38 P. M., reaching Roanoke at 7.50 A. M.; Knoxville, 3.52 P. M., and New Orleans, 12.45 P. M.

This train is very handsomely appointed, being vestibuted throughout, and has Dining Car service New York to Chattanooga. At Washington a Pullman Sleeping Car, which runs through to Memphis, is added to the train.

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MEDICAL AND SURGICAL
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ORIGINAL ARTICLES.

VOLVULUS.

F. BYRON ROBINSON, M. D.,* CHICAGO, ILL.

Volvulus signifies the twisting of a loop of bowel around its mesenteric axis. Also two loops of bowel could twist around each other.

Sixty per cent. of volvulus occurs at the sigmoid flexure; thirty per cent. occurs at the cecum and ten per cent. occurs in the small intestine.

The cause of volvulus is—(*a*), an elongated mesentery, (*b*), a fatless mesentery, and (*c*), constipation.

Volvulus occurs in males four times as often as in females. This is a curious fact as females are generally more constipated than males. But I suggest that the mesentery of females is longer than that of males.

Volvulus constitutes about $\frac{1}{25}$, or 4 per cent., of all intestinal obstruction. The average age at which it occurs is 50 years—a time when constipation is prevalent and the mesentery is most elongated and fatless.

I have performed many experiments on dogs and human cadavers, and on the intestines of other animals, in order to learn how a volvulus was produced. The first experiments were done on dogs. The abdomen was opened and loops of intestine were drawn out and twisted on the mesenteric axis. The volvulus would always untwist if it was not sutured. After considerable trial, even with the twisted bowel fixed in place by sutures passed through the mesentery, I could not keep a volvulus in its original twist in the living dog. If I wound the omentum around the twisted loop, the dog having recovered in a couple of days, on killing him the volvulus was found untwisted. In one large dog I opened the abdomen, drew out a loop of bowel, twisted it around its mesenteric axis four times and sutured it to the mesentery and omentum. In two weeks after the operation I killed the dog, the volvulus was found reduced but, in reducing, the volvulus had formed two omental bands, one 2½ inches, the other 6 inches long. These bands had been formed out of the omentum as the volvulus had unrolled. They would serve for traps to strangulate the bowel. Other bands also formed but were mostly absorbed. In human cadavers with elongated mesenteries we have forced the feces into the sigmoid with an elongated mesentary. Now if further attempt would be made to force fluid through the sigmoid, the weight of the feces seemed to aid in the tightening of the bowel and obstructing the passage. There is no doubt that volvulus is retained and made worse by some sigmoids having mesenteries allowing masses of feces to get into the middle of the loop and by its very weight, when, the sigmoid was twisted, make it unable to regain its normal position. The intestines of calves were experimented on to produce a volvulus but not much light was thrown on the matter. Calves intestines are very long and so coiled on the mesenteric edge so that it looked at first as if one could be made by injecting water. But the peculiar mechanism of the mesenteric attachment to the intestines always allows the bowel loops to escape being caught.

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*Prof. Gynecology in Post Graduate School.

Volvulus in a human being generally comes on suddenly without any previous history. Its first appearance is accompanied by *pain*. The *pain* is not so severe as in complete sudden constriction of the bowel. It is generally periodic until the twist completely obstructs the bowel. Complete bowel obstruction gives rise to constant pain. The more suddenly he volvulus occurs the more violent is the ain. The pain is generally local and referred. The referred pain is near the umbilicus or abdominal brain. Opium quiets the peristalsis and masks the symptoms.

Vomiting is not so conspicuous a feature as in sudden complete obstruction, but it occurs in various degrees in most of the cases. Tympanites is one of the peculiar features of volvulus. The abdomen becomes rapidly distended and drum-like. The tympanites is due to a reflex paralysis. The irritation from the seat of the volvulus is carried to the abdôminal brain by way of the inferior mesenteric plexus (from the sigmoid) when it is reorganized and sent out to all the digestive tract. The irritation on reaching the gut wall paralyzes the plexus and thus renders the gut wall flaccid. The irritation then proceeds to the next plexus just under the mucous membrane, known as Meissner's plexus. This plexus controls secretion. The irritation deranges the plexus so that it secretes excessively, deficiently or disproportionately. The deranged secretion induces fermentation which ends in the production of gases. Thus, according to my views, is explained the enormous tympanites in volvulus. A certain degree of irritation, not too severely infective, is what causes tympanites by reflex paralysis. If there be too much infection, as suppurative peritonitis, no tympanites occurs. The abdomen is flat.

The *shock* of volvulus depends on the amount of nerve traumatism. The effect of shock is by means of the sympathetic nerve centers—especially the abdominal brain. The objective symptoms are a profound, grave and violent change in the vascular system. The red blood leaves the surface. The effect will depend on (a), the individual constitution (b), on the amount of visceral nerve traumatism and (c), on the suddenness of the attack. The main idea is the amount of damage inflicted on the peritoneal and visceral nerves.

Volvulus is a rapid and dangerous affection. It frequently kills, if not relieved, in six days. We do not possess sufficient knowledge at present to assert that a volvulus once formed, ever reduces itself. In fact, many cases of volvulus on being formed have a kind of spiral spring, which aids in retaining them and prevents untwisting. It is very difficult to diagnose volvulus without exploration, but its indications are amply sufficient to do laparotomy. Constipation is absolute from the beginning. In operating for volvulus, the hand should first be passed to the sigmoid flexure, as 60 per cent. occur there. It should then pass to the cecum, as 30 per cent. occur there. If the volvulus is difficult to unwind, it should be so sutured to the abdominal wall that it cannot recur. If it cannot be reduced at all (as has happened) one should anastomose the gut above to that below the volvulus with the author's segmental rubber plates or with Murphy's button.

In autopsies of humans I have found volvulus of the cecum, but was unable to say whether it was sufficient to disturb normal life or not. Very brilliant results may be gained by early laparotomy in volvulus, but left alone it is nearly always fatal.

Passed With Honors.

Examining Medical Professor—Now, sir, tell me how you would treat a case of typhoid fever.

Student—Well, sir, I should first—I should first—I—

E. M. P. (impatiently)—Yes, yes; go on.

Student (seized with a brilliant idea)—I should first call you in for consultation.

Passes with honors.—*Tid-Bits.*

"The paths of pain are thine. Go forth
With patience, trust, and hope;
The sufferings of a sin-sick earth
Shall give thee ample scope.
Beside the unveiled mysteries
Of life and death go stand,
With guarded lip and reverent eyes,
And pure of heart and hand."

—*Whittier.*

CLINICAL LECTURES.

SPONTANEOUS EPISTAXIS.

CARL SEILER, M. D.,† PHILADELPHIA.

Spontaneous epistaxis is perhaps, one of the most annoying ailments that the practitioner of medicine is called upon to treat, because, as a rule, it occurs during the night when the patient is most easily alarmed at a copious flow of blood from the nose, and sends for the doctor without giving him information as to what he may prepare himself for. I speak from experience, as I have been called out of bed many and many a night on such an errand. I have in times past tried the different methods mentioned in the well-worn text-books, such as plugging the nasal chambers, both anteriorily and posteriorly, with anything at hand, bed feathers, rags, sponges, and what not, only to find that the patient, although the flow of blood was stopped for the time being, was uncomfortable, and that the epistaxis recurred with renewed vigor as soon as the plugs were removed. Shortly before the late Dr. Agnew, our venerable Nestor of Surgery in this country, died, he told me that he had found a piece of ham fat to be one of the best, if not the best material, with which to arrest nasal hemorrhage, and reasoning from the pathological condition producing the hemorrhage, unlike cotton or feathers or linen rags are materials which, owing to their filamentous constitution allow the new-formed vessels of granular tissue to entwine themselves in their fibres, and on removal of the plugs a portion of these newly-formed capillaries are torn off and, consequently, bleeding starts afresh. The ham fat, on the other hand, exerts an even pressure, allows the granular tissue to form, but presents no crevices or attachments for the embryonic capillaries, so that on its removal the bleeding is not likely to immediately ensue. This reasoning borne of an intimate knowledge of histology, pathology and of a minute anatomy of the nasal chambers led me to search for the origin and original cause of idiopathic epistaxis, and my researches proved that spontaneous nose-bleeding is invariably caused by an abrasion of the mucous membrane of the septum, which causes an accumulation and drying up of the natural nasal secretion so that a scab of dried mucous covers the abraded spot under whose protection the natural process of repair goes on in the form of granulation of tissue, and the new formation of healthy mucous membrane with its epithelial covering.

If now this protecting scab is prematurely removed by scratching or too forcible blowing of the nose the capillaries of this granulating tissue not as yet having attained maturity or protection by epithelium pours out the blood which is supplied to them by the arteriols.

Having theoretically arrived at this conclusion as to the cause of spontaneous epistaxis I reasoned further and the theory arrived at is, that the immature or embryonic capillaries of granulating tissue having no muscular walls, and being as they are, mere channels without limiting walls between the masses of granulation cells have not the power to contract and, therefore, if opened, bleed, which was proved by experience, for I found in a large number of cases that the simple scooping away of the granulating tissue at the seat of the abrasion, until arteriols and capillaries were reached stopped all further hemorrhage, and the subsequent application to the spot of a strong solution of nitrate of silver (2 drachms to the ounce) formed a sufficiently strong and adherent covering to allow the full development of healthy mucous membrane to cover the original abrasion.

It is, however, no easy matter, in fact impossible to detect this granulating tissue in one or the other of the anterior nasal cavities while the flow of blood goes on, and obscures everything within the cavity so that it is necessary as a preliminary step to check the flow of blood.

As stated above I found Dr. Agnew's ham fat superior to anything I had used before but this material is not always at hand when wanted, and I substituted for it a substance known as spunk which is made of the fungi which grow like shelves on beech and maple trees and is used in this country mostly by dentists as the best absorbant of moisture, for drying cavities of teeth before filling. Even that although far superior to ham fat, owing to the fact that when saturated with any fluid such as blood it swells to thrice its size, thereby exerting pressure and does not present the porous surface for the entanglement of the newly-formed capillaries just like the ham fat has the great disadvantage common to all plugs that it fills up the nasal chamber into which it is introduced, allows the blood to flow backward into the posterior nasal cavity and around forward through the other nasal chamber so that this also must be plugged up tight and both plugs have to remain until the surgeon can again visit his patient and remove them.

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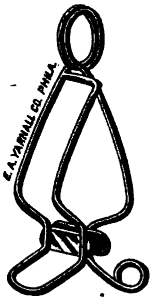
†Lecturer on Diseases of the Throat and Nose, University of Pennsylvania.

To avoid this difficulty and annoying waste of time on the part of the surgeon I have for the last few years employed a wire clamp, which is nothing more or less than a patent clothes-pin made of wire, slightly modified to suit the purpose for which it is to be used, and of which the accompaning cut gives a fair representation.



This *epistaxis clamp* is nothing but a piece of wire, moderately stout, twisted at its upper end into a ring which gives the necessary pressure to the extremities by its spring. The shanks of the clamp are bent in such a fashion that they separate near the ring, but come close together at their elbows, which latter are furnished with metal plates for the purpose of preventing the sharp point of the elbow from producing unnecessary pain when applied. Immediately below these plates the shanks are bent outward at a sharp angle for the purpose of giving the necessary hold to the finger of the surgeon applying the instrument. When this instrument is to be used the bleeding spot should be determined as nearly as possible. A pad of absorbent cotton, covered by a bandage or strip of muslin or other material should be placed over the bridge of the nose below the nasal bone like a saddle is placed on a horse, and the clamp adjusted in such a way over the pad or saddle that by its spring action it presses the alæ of the nose against the cartilapinous portion of the septum on either side thus effectually and completely closing the external opening of the anterior nasal cavities. If then a backward flow into the posterior nasal cavity takes place all that is necessary to stop this is to enjoin the patient to lay on his stomach and hang his head over the edge of the bed until the blood has coagulated and formed a sufficiently consistent clot to act as a plug posteriorly. Of course he should also be told not to "hawk" because that action of the soft palate loosens the clot, and he should be told to simply spit out the blood as it flows down on the back of the tongue which it must do if he maintains the above described position.

Perhaps one of the greatest advantages of this little device is that the patient himself can remove the anterior nasal obstruction as it is produced from without, and cleanse the one anterior nasal chamber, thus enjoying the comfort of nasal respiration. If, however, he in his distress should have been tempted to remove the clamp before the blood clot on the bleeding side has attained the necessary consistency to stop the bleeding of the embryonic capillaries by its pressure and the epistaxis recurs he or his nurse can easily reapply the clamp.

After the lapse of from fifteen to twenty-four hours the clot may be removed by gently drawing it out with a pair of forceps and the abrasion can be seen after the anterior nasal cavity has been properly illuminated. It is usually the case that we find a little oozing from the spot and it is by means of this that the surgeon is enabled accurately to locate it. All that is necessary then is to scrape away the granulation tissue until the matured arteriols are reached which having sufficient contractile power in their muscular coats to close their lumen and thus stop the oozing, and the subsequent application by means of a cotton wad or camel's hair brush to the abrasion of the above mentioned nitrate of silver solution to prevent any further recurrence of the nasal hemorrhage. Of course this method is applicable only in those cases of ordinary idiopathic epistaxis, but will not answer in those cases which depend either upon the systematic disease such as phthisis, tuberculosis, lupus and typhoid fever, or in which the hemorrhage is caused by nasal polypi, or finally in the rare examples of hæmophelia.

COMMUNICATIONS.

MULTIPLE CYSTOMAS OF THE LIVER TREATED BY INCISION AND EVACUTION.*

JOHN B. ROBERTS, A. M., M. D., PHILADELPHIA.

A German woman, fifty-six years of age, was admitted to the Woman's Hospital on October 2, 1893. For ten years she had noticed a swelling, in the right side of the abdomen below the ribs, which for about one year had been somewhat painful. She had always been a healthy woman and had borne seven children. The menopause had been established ten years previous to her admission. One week before entering the hospital she began to suffer with dyspnœa and cough, accompanied by constipation and fever.

Physical exploration of the chest by the hospital physicians showed some dulness over the bases of both lungs posteriorly, with prolongation of expiration and some mucous râles. The vesicular murmur was high-pitched over portions of the dull area. The heart's action was rapid and excited. The pulse was 76, the temperature 101.8°. The frequency of the respiration, however, were not recorded; but breathing was rapid and labored. The pulse was somewhat intermittent and was irregular in rate. In the abdomen was discovered a large mass occupying the greater part of the right hypochondriac and lumbar regions. The tumor was irregular in outline and near the middle line presented a particularly marked elevation, which was elastic on pressure, and gave the examiner the impression that it was a cyst. Percussion dulness was found in the right flank, tympanitic resonance in the left; but there was bulging in both regions. The intestines seemed to be pushed to the left side of the abdomen and were distended with gas. The urine was acid, of a dark color, and had a specific gravity of 1020. Its chemical and microscopical examination was negative. The woman was not jaundiced, and her bowels were moved freely after the administration of Epsom salt and an enema. There was no bulging in the vault of the vagina and the mass in the upper abdomen was not palpable by vaginal touch.

Under treatment directed to the pulmonary condition the cough improved, the mucous râles nearly disappeared and the expectoration became free. The patient, however, still found it difficult to lie flat upon her back, and usually was propped up in bed to make her respiration more easy. I repeatedly examined the woman during the first three weeks of her stay in the hospital, and became quite convinced that the tumor was a cystic growth involving the liver, and that portion of her dyspnœa was the result of upward pressure of the abdominal mass. This opinion was concurred in by Dr. F. P. Henry and Dr. Anna M. Fullerton.

On October 20th I made an incision some four inches long in the median line, extending from a point near the ensiform cartilage downward to one a little below the umbilicus. The incision uncovered that protuberant portion of the tumor which was conspicuous before operation was undertaken. This was evidently a cyst occupying the right lobe of the liver immediately below and to the right of the suspensory ligament. I discovered, by inserting my hand into the peritoneal cavity, that both the right and the left lobes of the liver, as far as I could feel, were occupied by numerous cysts, varying in size from an inch to four inches in diameter. The liver, by reason of these cysted growths, was enormously enlarged and the suspensory ligament extended almost to the umbilicus because of the growth upward and forward of the upper surface of the liver. I could feel the gallbladder beneath the enlarged right lobe, and by palpatation discovered that it contained an irregular calculus. There was a little ascitic fluid in the peritoneal cavity. The cysts seemed not to communicate with each other but to develop independently throughout the substance of the organ.

The prominent cyst over which the incision was made was stitched to the parietal peritoneum by a continuous suture, because I believed that it was wise to delay its puncture until adhesion has taken place with the anterior abdominal wall. At the left side of the cyst above, the sutures were carried through the tissues of the suspensory ligament of the liver instead of being inserted into the cyst-wall proper. This procedure left an opening in the belly wall, occupied by the surface of the cyst, about three inches long and two inches wide. The lower part of the incision was closed by three interrupted silk sutures, so that the peritoneal cavity at this point might be kept closed. A dry antiseptic dressing was applied, and the patient was put to bed and treated as other cases of abdominal section are managed.

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*Read before the Philadelphia Academy of Surgery, 1893.

The diminution of intra-abdominal pressure produced by the escape of abdominal fluid and by the bulging forward permitted by the operation gave considerable relief to the dyspnœa. The contour of the abdomen somewhat changed and the outlines of the tumor were better defined on the left side. The patient was now able to lie down. Some clear serous fluid escaped from the upper portion of the opening where the liver was stitched to the belly wall. This coagulated from boiling and possibly came from the peritoneal cavity, not from any puncture in the cyst made by the needle. I was rather uncertain, however, as to the exact source of this leaking.

On October 27th I laid open the cyst without giving the patient ether. As I was about to begin operation her coughing and straining caused the ejection of a jet of serum from one of the suture punctures in the abdominal wound close to the umbilicus. This was evidence that there was some peritoneal dropsy and that the intra-abdominal tension due to the growth was great. The uncovered surface of the cyst was coated with a layer of plastic lymph of a yellow color.

A puncture was made with a trocar into the wall of the cyst and several ounces of clear fluid escaped. Into the cyst cavity thus emptied were projecting one or two distended cysts three-quarters of an inch to an inch in diameter. These were punctured and gave exit to limpid fluid. Directly behind the large cyst first opened appeared to be a second cyst. This I punctured with a knife and evacuated several ounces of fluid. I thought I detected with my finger fluctuation of a similar cyst behind the second cavity, though I could scarcely touch the posterior wall of this second cyst with my finger introduced through the first cyst and through the orifice between the two cysts. The sense of fluctuation was so similar to that given by the cystic tumors already punctured that I finally thrust a long trocar into the posterior wall of the second cyst. This operation was done, of course, in the dark.

Nothing but fluid blood escaped, and it is, therefore, probable that I punctured healthy liver tissue. The oozing continued while I was occupied in other steps of the operation, and was finally controlled, after a number of cysts had been emptied, by scooping out the clots and packing the deep cyst with iodoform gauze. Altogether I must have evacuated the contents of about three large cysts and five or six smaller ones, puncturing them with a knife thrust in various directions through the intervening cavities that had been laid open. The fluid in all of them was limpid. On the left wall of and within the first cyst opened was one of the cysts growing inward, already mentioned. When I punctured this with a knife I heard a whistling noise as though air had escaped from it. No fluid appeared to be in it, and at first I thought I must have opened the intestine, Careful exploration, however, with my finger showed the cyst to be empty and to have no perceptible opening in its wall except that made by the knife and through which I had introduced my finger. It seems impossible to believe that this contained gas only. A careful investigation of its interior with my finger failed to disprove this supposition. I am forced to believe that it was filled with gas but cannot understand the occurence. It was so deep that I could make no examination with the eye.

After some eight or ten cysts of various sizes had been opened by incising the wall between them, I cut away the anterior wall of the first cyst, making the opening into it correspond very nearly with the aperture into the parietes of the abdomen. This excision opened the peritoneal cavity at the upper and left portion of the wound where the suspensory ligament of the liver was attached to the left side of the abdominal incision. It will be remembered that at the first operation the suspensory ligament was seen and stitched to the belly wall in order to assist in shutting off the surface of the liver from the peritoneal cavity at the seat of proposed secondary operation. The opening into the peritoneal cavity, made by the unexpected cutting through the suspensory ligament, was closed by a continuous silk suture. I then excised for examination a portion of the tissue which constituted the walls of several contiguous cysts in the bottom of the deep cavity in the liver made by evacuating the several cysts. An active venous hemorrhage occurred from a vein which was opened by cutting through the inter-cystic wall at a place where it was rather thick. The bleeding vein was compressed with pedicle forceps and afterward surrounded by two silk sutures carried through the tissue in a circular manner by a needle. This manœurve stopped the bleeding. The irregular cavities left by the evacuation of the cysts' contents were thoroughly washed with hot water and the whole space packed with iodoform gauze. A separate piece of gauze was pushed firmly into the deep cyst, which was being filled as previously detailed with blood from the wound in the liver behind. The patient showed comparatively little shock during the operation, reacted promptly, and has been for ten days in a satisfactory condition. She can lie flat upon her back, the respiration has been much less impeded, and no evidence of sepsis or peritonitis have occurred. The packing was not removed until the ninth day, and a new gauze packing was then adjusted loosely. Twelve hours later a secondary bleeding occured from the deep cyst, and iodoform gauze was again *tightly* packed into it. The fluid removed from one of the cysts was examined microscopically for echinococcus hooklets, but none were found. Chemical examination showed it to be albuminous—a condition opposed to the theory of the case being one of multiple hydatid cyst. The amount of serous fluid evacuated from the cyst opened was difficult to estimate, as the blood from the deep wound of the liver became mixed with the cystic contents. The fluid and blood together measured two quarts.

I have made only a hasty search of the literature of hepatic cysts; but have not been able to find as yet a case resembling this except one reported by Hayward.[1] His patient was a girl, six and a half years, who died after operation for multiple small cysts apparently connected with the anterior surface of the liver.

Cases of cystic degeneration of the liver and similar disease of the kidneys in the same patient have been observed and reported by Bristowe, Chantrenil, Courbis, Gayraud, Lataste, Pye Smith, Leboucher, Wilks, and perhaps others. The London Pathological Society's *Transactions* contain some interesting discussions on the subject. The cases whose reports I have thus far seen seem to differ materially from the case reported. Most of them seem to have been instances of very small cystic tumors, or more like a true cystic degeneration. Victor Leblond,[2] in his recent work says that serous cysts of the liver, that is, non-parasitic cysts, are very rare, that there existence is denied by some authors, that they are small and difficult to recognize and are apt to be associated with polycystic kidney. Mayo-Robson gives in his article on "Surgery of the Liver and Gall-bladder,"[3] an interesting account of cysts of the liver.

In my case here reported the condition of the kidney is unknown, for the patient is still living and apparently is convalescent. The cysts, however, certainly contained serous fluid and are quite large.

FURTHER NOTE.—The patient seemed to be slowly convalescing, when a large bedsore formed over the sacrum, notwithstanding the fact that she had been kept on a water bed since before the operation. The temperature was somewhat elevated, but not markedly so. On November 11th, three weeks after operation, she died suddenly and unexpectedly.

AUTOPSY NOTES.—Cyst wall found to be firmly united to abdominal wall at edges of wound, as approximated at time of operation. Extensive adhesions of the peritoneum found over the entire lateral and posterior surfaces of the liver.

The liver itself was greatly enlarged, weighing 11½ pounds, and was riddled throughout by cysts. One large cyst, opened post mortem, in the right lobe of the liver was found to contain about a pint of yellowish pus-like fluid. The solid portions of the liver resembled the condition called "nutmeg liver." A stone was felt in the neck of the gall-bladder, and the gall-bladder itself was greatly attenuated as a result of the pressure induced by development of the cysts. The spleen was somewhat enlarged and contained a whitish spot of softened tissue resembling a gummatous tumor. This was incised for examination. Both kidneys were greatly enlarged and riddled with cysts. The uterus and ovaries were found atrophied and non-adherent.

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[1] Sajous' Annual of the Universal Medical Sciences, 1892, vol. 1., C. 33; abstract from *Australasian Medical Gazette*, September, 1891,

[2] Diagnostic et Traitement des Abces au foie (1893), p. 62.

[3] *British Med. Journal*, April 15, 1893, p. 787.

The pleural cavity of the right side was full of serous fluid. The base of the right lung posteriorly was completely consolidated. The left lung showed small areas of consolidation at its base and posteriorly, but was for the most part crepitant. There was no fluid in the pericardial sac.

The heart was pale, very soft and flabby and of normal size. The right ventricle was completely filled by a soft chicken-fat clot. The left ventricle was similarly occupied by a clot which extended into the aorta. Valves were perfect.

CLEFT OF THE HARD AND SOFT PALATES.*

J. EWING MEARS, M. D., PHILADELPHIA.

An experience extending over a period of twenty-five years, in which time I have treated by operative procedures upward of one hundred cases of deformities of the palate, has afforded me an opportunity to study the conditions involved, the measures for relief, and the value of the results obtained. The cases under treatment have included all forms, I believe, of congenital and acquired cleft—deformity limited to the soft palate, partial and complete in its extent; of the hard palate—partial and complete, including involvement of intermaxillary bone, and the upper lip, with either single or double cleft. With regard to the cleft of the soft palate, I have observed that in nearly all cases of complete cleft there has coexisted a cleft in the hard palate, implicating to a slight extent the horizontal plates of the palate bone. I soon learned that this condition had an important relation to the success obtained in effecting closures, and I shall refer to it when discussing operative measures.

Of acquired cleft I have met with various forms—from simple perforation, by a small opening, to almost entire obliteration of the soft and hard palates, with destruction of portion of the osseous structures of the nasal cavities. In one instance there was not only a fissure in the median line, but the lateral portions were united by firm adhesion to the posterior walls of the pharynx.

In congenital cleft of the hard palate I have met with instances in which the fissure being bilateral there has been more or less deficiency of the vomer, and in other cases the fissure being limited largely to one side, the vomer, somewhat deflected has been found in articulation with the side less involved, thus permitting communication between one nasal fossa and the ora cavity only.

In the study of the cases under treatment I have been interested in arriving at satisfactory conclusions as to the causes concerned in the production of the deformity, and to what extent hereditation and maternal impressions take part. During the summer of 1876 a lady from the far West came to my office for consultation. As soon as she addressed me I thought I recognized by the nasal articulation and guttural tone of voice, a cleft of the palate, and remarked: "I know why you have come to me for consultation; you have a cleft palate." She replied: "I have not, but I have the articulation of one having a cleft palate, and I have come to you for relief." On examination I found there existed a marked shortening and rigidity of the soft palate which prevented its contact with the posterior wall of the pharynx and thus led to the production of the nasal tone of voice. By division of the tensor palati and the palato-glossi and pharyngei muscles I relieved the tense condition of the velum and secured its elevation so that it approached quite nearly in contact with the posterior wall or the pharynx and very materially improved the articulation. The patient had recently married. A few years after she brought to me her first-born child, which had a complete cleft of the soft, with partial cleft of the hard palate, upon whom I operated with good success.

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* Read before Phila. Academy of Surgery.

A man, upward of fifty years, consulted me for cleft of the soft palate, the result of diptheritic inflammation when a child. His mother dying during his childhood, his father married a second time, and he was a victim of a step-mother's jeers, as well as of her cruelty, on account of his unfortunate condition. Daily she would imitate his tone of voice. Her first child by the victim's father had cleft of the palate. Other instances I have met with in which the mother attributed the condition in the child to having conversed with a person who suffered with cleft palate, etc.

Whatever casual effect hereditation and maternal impressions may have, the observations made in the Dublin Zoological Gardens some years since in the case of lion whelps, have quite positively determined that the condition may be due to a want of proper nutrition in the mother during the period of gestation. Up to the time referred to it had been impossible for the authorities in charge of the garden to rear the young of the lion on account of the universal occurrence of cleft of the palate, which prevented the taking of nourishment to maintain life. The plan of giving to the mother during pregnancy ground bone and food containing the inorganic elements of bone was crowned with success, and within the past years a large revenue has been derived from the sale, to all parts of the world, of lions raised in this garden. The lion whelps in the Zoological Garden in this city have suffered in the same manner, and I have suggested to the superintendent to adopt the plan practiced in the Dublin Garden. During our conversation he stated an interesting fact, that the whelps of lions in traveling menageries did not suffer as those born of mothers confined in gardens, and he was disposed to account for the fact by the rough life led by them, as well as by the variety in the food, consisting of bones as well as of meat—sometimes more of the former than of the latter.

The conclusions which may be drawn from the consideration of the above observation are to the effect that the fissures are due to a want of coalescence of the palatal processes and embryonic tissues during embryonic life, the absence of which union is not due to an infolding or reduplication of the membranes, but to a positive non-development caused by want of proper nutrition. Coalescence cannot take place because the parts are not in approximation.

The conditions presented by persons the subject of cleft palate, are defective articulation, defective deglutition, and, as a rule, more or less chronic inflammation of the nasal and pharyngeal spaces. Those conditions vary in degree in accord with the extent of the lesion, but I have observed as great an involvement of articulation where a slight notch only existed in the uvula as where both soft and hard palates have been fissured. The important function of the velum is, by its approximation to the posterior wall of the pharynx, to shut off the cavity of the mouth from the cavity of the nose, so as to prevent the passage of sounds and of food into the latter during articulation and deglutition. The muscles of the velum control by their action the opening and closing of the posterior nasal apertures, as those connected with the nasal cartileges regulate the opening and closing of the anterior nasal apertures. In cases of palate fissure in adults I have observed the use made by the anterior muscles in the effort to do the duty of the velum in so narrowing or contracting the anterior nasal openings as to prevent the escape of sounds or food. The chronic inflammation which exists in cases, as a rule, of extensive fissure, is due to the exposure of the parts to the effect of the air which comes directly in contact with the surfaces without passing through the recesses of the normal nasal fossæ.

The object to be accomplished by treatment is to close the clefts. This can be done either by the adaptation of artificial appliances—obturators—or by operative procedures—staphylorrhaphy, when upon the soft palate; uranoplasty, when upon the hard palate. Since the introduction of these methods each has had its period of employment. Discouraged by the failures to obtain perfect results by operation artificial appliances came into vogue and were employed to the exclusion of operative measures. These failing to satisfy the requirements and especially failing to give comfort to the patient, lost favor and a revival of operative methods has occurred. In my experience I have never found the use of the obturator in cleft of the soft palate satisfactory. In cleft of the hard palate alone I have frequently advised its employment, where the rudimentary palatal processes have been so narrow as to forbid operation, or where the openining was not very large. In some cases in adults of cleft of soft and hard palates, I have closed the soft palate by operation and had adapted to the opening in the hard palate an obturator. In children, I always advise closure by operation.

I have operated at various periods of life—from three years to fifty. I advise operation at an early age in order that the growth of the parts may be facilitated, and that the education of the child may receive proper attention. In children and young persons, especially in females, I use an anæsthetic agent—a mixture of chloroform one part to ether two parts; the patient is placed or held in a sitting or semi-recumbent position. The mouth is held open by a gag which I devised and which has proved satisfactory, easy to introduce, readily held in place, and one which can be quickly removed. In paring the edges of the cleft I secure as large a raw surface as possible in order that the union may be strong. I have tried many forms of needles and varieties of sutures, and I have found the simplest the best. The instrument employed consists of a handle to which needles of various curves can be securely fastened. Silver-wire sutures of medium size are used, a strong linen thread, double, being first deposited and the wire suture hooked into the loop and drawn through; the suture is deposited on one side at a time. The needle is introduced some distance from the edge so as to include a sufficient amount of the tissue to hold the edges firmly in apposition without tension. When the sutures are all in position the edges are brought together and the muscles divided which may be neccessary to relieve all tension. The tensor palati is divided near to the hamular process, and the platoglossi and plato-pharyngei as low down as they can be reached. In my later operations I have removed the sutures earlier, beginning on the fifth or sixth day to remove those affording the least support and completing removal by the seventh day. This plan has given better results. Liquid food, milk chiefly, is administered by a spoon, whilst the sutures are in position. The patient gradually returns to the use of solid food.

In operations upon the hard palate the method of Sir William Ferguson has been latterly employed, having failed by other methods to secure good results. The steps of the operation consist in freshening the edges, depositing the sutures through openings made with the drill in the bony processes, division of the processes by the chisel or saw, drawing of the segments thus formed to the middle line, and securing them in place by twisting or shotting the wire. The section of the bone should be made so as to avoid wounding the vessels and nerves which come into the oral cavity through the posterior palatine canals, and which line in a groove at the base of the alveolar process. Division of the soft palate downward is necessary to bring the segments in position without undue tension. The cavities formed by the transplantation of the segments are plugged with iodoform gauze, 5 per cent., which affords support and controls hemorrhage. On the third day the plug is removed, and as the spaces close they are gradually reduced in size.

End-results. As to operative procedures on the soft palate. If careful examination has been made to detect slight notch in the hard palate and the bone has been divided, union in entire extent has occurred. In cases of long uvuals non-union has sometimes occurred at the very end; if the length permits, cut off.

As to the hard palate. In certain cases slight necrosis of portions of the segments, caused by splintering at the time of section, has occurred and the pieces removed. This has not interfered with the reparative process. In one instance the space on one side, left after drawing segments to the median line, was so large that it did not close completely—an obturator was successfully adapted.

As to the restoration of function. In all cases of deglutition has been markedly improved, rendered perfect except in a few instances of short and rigid vela in which hasty and careless efforts at swallowing are accompanied by the passage, especially of liquids, into the nasal cavities.

The improvement in articulation has

varied greatly and the improvement has depended largely upon the size and conformation of the faucial and pharyngeal spaces. In a few it has been complete. I can recall at this time a lad who had complete cleft of palate, alveolar process, and upper lip. In infancy the cleft of the lip was closed by Professor S. D. Gross. At the age of twelve I closed the palate cleft, and in his case articulation was so perfect that no variation from the normal could be detected. A lady, twenty-eight years of age, had cleft complete of the soft with partial cleft of the hard palate. After operation she became a salaried member of a church choir, her voice being entirely free from nasal tone. In many the improvement is partial but progressive, especially in children where pains are taken to educate them properly. In some cases where I have been able to retain charge of the patient I have rendered assistance, as growth took place, by subsequent division of the palate muscles, thus increasing the movement of the velum.

In all cases, children and adults, the effect upon the *morale* has been good, and for this reason, if no other, the operation is justified.

TUMORS OF THE PERIPHERAL NERVES; WITH THE REPORT OF A CASE OF SARCOMA OF THE SCIATIC.

THOMAS S. K. MORTON, M.D.*

All tumors growing in or upon peripheral nerve trunks have come to be classed as neuromata, and of these two general divisions are made—the true and the false. The true neuroma is composed of nerve elements, while a false neuroma is a tumor developing in connection with a nerve or its sheath, but not composed of nerve elements. Virchow has proposed that only true nerve-tissue growths be called neuroma, while other tumors growing in connection with nerves shall receive the same name as would similar neoplasms occurring elsewhere. This more simple and accurate method of classification has not, however, been followed generally by writers.

Fibroma is the common tumor found in connection with nerve trunks, and is usually composed of white fibrous material with few connective-tissue cells. Plexiform and multiple neuromata are usually congenital and often hereditary, slowly growing varities where a number of nerves undergo a fibrinous change and occasionally form plexes of sensitive interlacing cords. The subcutaneous terminal extremities of sensory nerves may undergo fibrous changes and form the so-called "tubercle dolorosa." According to Bowlby[1] sarcoma is next in order of frequency. "They may belong to the round, oval, or spindle-celled varieties. In such growths especially in those which increase very rapidly in size, degeneration cysts may form so that the tumor may become partly filled with fluid. The contents of such cysts are usually blood and broken-down cells." Very rarely myxomas are met with. In these the mucoid material grows from the nerve sheath. Glioma, as may also be said of syhiloma, is all but unknown, excepting upon the cranial nerves, and even upon these is almost never observed beyond the confines of the cranium. Two cases of simple cyst containing clear fluid, in connection with nerve trunks have been reported by Bowlby. I have found references to cases upon record as fibro-sarcoma, myxo-sarcoma, and cavernous sarcoma; also to "blood-cyst" of nerve trunks. The two latter, in the light of modern pathology, probably being instances of cystic degeneration of simple sarcoma. All nerve tumors show a marked tendency to malignant degeneration. Secondary or metastatic tumors of nerves are probably not uncommon. Probably more records of tumor of the optic nerve than all others put together are to be found in medical literature, but nerve-trunk tumors must be considered as rarities when judged by the very small number that I have been able to find reference to in the books and *Index Medicus.*

Diagnosis, before operation, except in

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[1] Injuries and Diseases of Nerves. London, 1892.

the case of superficial neuromata, unless there are marked motor or sensory disturbances, is almost impossible in the majority of cases. Even these symptoms may be simulated by pressure upon the nerve by outside growths. It is a remarkable fact that most tumors of nerves give rise to but trivial changes of sensation, and the conveying and trophic power of the fibres is almost never fully destroyed. When the tumor has actually been exposed by dissection, unless the surgeon is exceedingly careful, a nerve is liable to division or other injury before the true nature of the growth is discovered. Cases are upon record where excellent surgeons have not recognized the nature of tumors until the ensuing paralysis of function and the microscope have solved the problem.

Removal of these neoplasms which involve all of the bundles necessitates total division of the nerve trunk above and below the tumor; which should be followed, if possible, my immediate approximation of the ends by the employment of some one of the various methods of suturing, lengthening, or splicing and the subsequent placing of the parts by posture in that position which gives greatest relaxation to the nerve trunk involved. Where approximation is impracticable the ends should be "aimed" at each other by chromic catgut sutures, and regeneration with more or less restoration of function may be expected to slowly supervene in many cases. When the growth involves simply the sheath of a nerve, either internally or externally, prompt recognition of its nature and relations, together with careful dissection, will prevent injury to the nerve itself. If the tumor is within the sheath—as in my case—a longitudinal division of the sheath without division of any of the nerve fibres will be sufficient to fully expose it. If then it is found to arise from a few of the nerve bundles these may be divided and the growth shelled out of its bed, if possible, without rupturing the capsule if it possesses one. Any small number of fibres that may be thus divided may be expected to regenerate and coalesce; larger bundles should at once be sutured with catgut. Subsequent suture of the divided sheath would appear to be a neat point of technique, but as proved in the case here reported, is sometimes unneccesary. On the other hand, the possibility of hemorrhage taking place within a tightly sutured sheath must not be lost sight of. Gowers is authority for the statement that excision of nerves on account of tumor is prone to be followed by the development of bulbar (traumatic) neuromata. This may have been true of nerve sections prior to the antiseptic period, but absence of suppuration, combined as it often can be, with immediate suture should render such results here, as elsewhere, very unusual.

The history of the case which has suggested these remarks is as follows:

Mrs. D. A., aged forty-two years, a Russian of the middle class, entered the Polyclinic Hospital October 3, 1893, with a tumor upon the back of the left thigh. Family history negative so far as could be secured. Physical examination, excepting the tumor, negative. Urine normal.

She stated that about one year previously she had accidentally discovered a small nodule deeply situated upon the posterior portion of the left thigh; that it had grown slowly at first, but during the past three months with increasing rapidity; and that, excepting inconvenience in sitting upon the mass which gave rise to some pain, the tumor had caused little or no discomfort. No definite history of any sensory or motor disturbance in the sciatic distribution could be elicited.

The growth was the shape and size of a large goose egg, with its long axis corresponding to that of the thigh. It lay exactly over the course of the great sciatic nerve, midway between the tuberosity of the ischium and the flexure of the knee-joint. It could be moved somewhat from side to side, but almost none at all upward or downward. It did not move when the posterior muscles of the thigh were exerted. To pressure and palpation the growth was almost insensitive. It felt like a soft fibroma or fibro-lipoma, but did not impart any sense of fluctuation.

On October 6th a careful dissection was made and the tumor exposed at the base of a six-inch incision. It was noted that each time the growth was impinged upon by the finger or an instrument, the lower leg gave a sharp, convulsive start. When moderately cleared of its surroundings, the fact that a neoplasm involving the sciatic nerve was to be dealt with was made very evident by observation that the fibres of nerve could be seen as glistening white cords of varying size, beautifully frayed or spread out as they ran around the growth through the encapsulating nerve sheath. A vertical incision, avoiding nerve fibres, was made to the full extent of the tumefaction through this apparent capsule, when it was further discovered that the tumor proper was entirely disconnected with the sheath, and was separately enclosed in a capsule within. The growth was readily separated from the sheath of the nerve in all directions except at points at the extreme proximal and distal extremities, where a few nerve fibres entered and emerged from it respectively. Some small blood vessels appeared to accompany the strands of nerve substance into the tumor. These fibres having been divided, the growth was lifted out without further difficulty. Upon examining the cavity in the nerve sheath from which it came, it was observed that most of the bundles of the sciatic were in advance of and had been spread out over the external surface of the growth, but that no appreciable injury had been done them with the exception of the few fibres which had necessarily been divided as they entered the tumor. No sutures were applied to the nerve sheath, nor were any ligatures called for. The wound was closed without drainage by alternate deep and superficial silk sutures and a pad of dressing so applied as to make compression upon the cavity left by the tumor. The operation was followed for two days by some pain in the sciatic distribution, but especially in the region supplied by the external popliteal, but no loss of power ensued. All pain disappeared in forty-eight hours, however, and afterward she had no disagreeable sensations. Upon the seventh day all sutures were removed and absolute primary union throughout was found. On the tenth day she began to walk about, and four days later walked home, apparently as well as ever. Up to this date she has so continued.

The tumor was ovoid in shape, four inches in length and seven in circumference where thickest. At either extremity a few nerve fibres and blood vessels appeared to enter or take their exit. Otherwise there were neither adhesions nor pedicle. The growth was encapsulated with a tough brownish-colored membrane, which brought away small granular portions of the tumor when forcibly separated from it by peeling. The neoplasm proper was of a yellowish-brown color, rather dry, and cut like fibro-fatty tissue. Exactly in the centre of the mass was a cavity, not definitely separated from the growth, which contained about half an ounce of bloody fluid. Most unfortunately, during the preparation of the specimen for further study it was accidently destroyed, so that I have not the satisfaction of adding to my clinical and gross pathological diagnosis of sarcoma that of microscopical confirmation. However, the details of several cases almost identical with this in every way, which I append, where sarcoma was proved by the only accurate method, will, I trust, be found to justify me in classing this case as one of that dread malady.

From the scant literature of peripheral nerve tumors I have abstracted the following cases, which are of great additional interest from the evidence which some of them afford relative to the remarkable regenerative powers of nerves, even when great lengths have been removed with tumors and suture has been omitted or found impossible.

Hume[1] reports the case of a man, aged twenty-four, who presented himself with a tumor on the back of the left thigh, which he had observed for five months. It extended from the fold of the buttock to the upper part of the ham, being ovoid in shape and movable from side to side, but not from above downward. There was much pain in the knee and foot, but no loss of motion or sensation. The tumor was easily shelled out with division of the entire nerve above and below. The growth was surroundrd by and incorporated with the strands of the nerve. Besides the main portion of the tumor, the nerve trunk above and below appeared to be infiltrated with the same material, so that it was necessary to remove in all six inches of the sciatic. The cut surface of the growth was of a yellow fatty appearance. There were several hemorrhagic spots in its substance; also others that looked like necrotic or caseating patches. It proved to be sarcoma. The man, soon after operation, was able to walk upon the limb, but there was much wasting and great impairment of sensation. Below the knee palsy of muscles and sensation was complete six months after operation.

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[1] Lancet, September 19, 1891, p. 654.

A second case, recorded in the same place by Hume. was that of a man, thirty-seven, who had noticed a nodule under the gluteus maximus of the left side four months before coming under observation. He had been subject to molluscum fibrosum from childhood. At the time of operation the growth had attained the size of a "melon." It was found to originate in the great sciatia, the strands of the nerve being stretched over and incorporated with the capsule of the tumor. The small sciatic lay over the tumor and was pushed aside. To remove the growth it was necessary to entirely divide the nerve close to the sciatic notch above and at the border of the gluteus below. By stretching of the nerve ends and extreme flexion of the knee and extension of the hip, all of the upper end of the nerve and one half of the lower extremity were brought together and sutured with strong catgut. In order to lessen strain upon the sutures the patient was made to assume the prone posture, with the hip in extreme extension. The tumor was found to be a round-celled sarcoma. There was primary complete paralysis of the functions of the sciatic. Eighteen months later skin sensibility of the foot was absent, but that above the ankle was almost normal, and there was very little atrophy of the muscles. At this time he presented a large sarcoma of the right chest wall, with pleural effusion, and died five months subsequently. It was then found that he also had a growth in connection with the pleura; nodules in several of the intercostal nerves, the liver, and in the humerus and lung of the opposite side. At the site of operation the sciatic nerve was found at the level of the tuberosity of the ischium to be divided into two portions; the internal of these passed into a nodular swelling, which was continuous upward with the proximal portion of the nerve; the external portion was lost in cicatrical tissue, by which it was attached to the surrounding parts and to the side of the nodule. The whole thickness of the lower end of the central portion was continuous with the nodular swelling. The latter had evidently formed at the line of suture with that portion of the peripheral division of the nerve which it had been possible to bring into contact at the operation. The nodule consisted entirely of nerve tubules and fibrous tissue. There was no local recurrence of sarcoma.

Hume, in the same article, also records the following case: A man, aged forty, had recognized a rapidly growing nodule behind his knee for four months. Upon incision in a large oval, growth of great vascularity was found in connection with the internal popliteal nerve. The short saphenous nerve was stretched over it, thus explaining all pain that the patient had suffered. Three and a half inches of nerve were excised. The ends were not sutured. The man soon returned to his occupation of miner, with paralysis of the popliteal distribution. The growth was encapsulated in the sheath of the nerve and appeared to be defined at each end, but a small number of nerve fibres passed through it. The bulk of the substance of the nerve laid behind the tumor. In its interior one or two cavities filled with blood were found. Six years subsequently the cutaneous sensibility of the leg had returned to the normal, excepting a slight impairment in the centre of the sole, and all muscular movements of the leg and toes were perfect. There was no wasting of the parts whatever.

Little[1] reports the following case: a woman, aged twenty-five, presented a large, firm tumor upon the posterior portion of the thigh above the popliteal space. The first symptoms were dull pains along the thigh and upward. There was no pain in walking, but considerable discomfort in sitting. The tumor pedicle sprang from the sciatic nerve sheath. One inch of the nerve was resected and the ends sutured together. The functional result was almost perfect in a few months. The growth was twelve inches in circumference. It proved to be a sarcoma and probably originated from the neuroglia. There was a true bony centre in the tumor.

McBurney[2] records a case where a man aged twenty-seven presented a growth of six years' development upon the inner side of the right arm. There had been no considerable pain until a month before operation; the pain extended down the arm and pressure was exceedingly painful. It was found to spring from the median nerve in the upper third of the arm; was encapsulated, and when opened, it was seen that the fibres of the nerve spread over the growth. The major portion of the tumor was behind the nerve. The neoplasm and capsule were removed with division of but a few fibres of the nerve which entered it. Microscopic examination proved the tumor to be fibro-sarcoma.

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[1] **Boston Med. and Surg. Journ. December 3, 1885, p. 533.**

[2] **New York Med. Journ., May 1, 1886, p. 504.**

In addition to the above detailed cases I have been able to find the following references to sarcoma of the nerve trunks:

Ramoneda: Sarcoma fuso-cellular del nervio neumo-gastrico derencho; su exterpacion, conservándose la continuidad del tronco nervioso; dotos intersandes acarca del nervio hipogloso. Rev. clin. de l'hosp. Madrid, 1891, iii., p. 241.

Van Inschot: Fibro-sarcome caverneux du nerf. radial (propagé an triceps brachial). Ann. Soc. de med. de Gand., 1887, lxvi., p. 14.

Weile: Ein Fall von Sarcom. des Nervus radialis. Erlangen, 1888, 8vo.

Bardeleben: Sarcom des Nervus ischiadicus. Charité Ann., 1883, Berlin.

Herczel: Ueber Fibrome and Sarcome der peripheren Nerven. Beitr, zur path. Anat. u. z. alleg. Path. Jena, 1890, viii., p. 38.

Peret-Gilbert: Considérations sur les néoplasmes primitifs des nerfs des membres. Paris, 1891, 4to.

Krause: Ueber maligne Neurome und Vorkomen von Nervenfasern in denselben. Samml. klin. Vort. 1887, No. 293.

TWO RECENT CASES OF EXCISION OF THE VERMIFORM APPENDIX FOR CHRONIC RELAPSING APPENDICITIS IN THE INTERVAL.

THOMAS G. MORTON, M.D.*

Joseph H. H., aged twenty-four, has been suffering for eighteen months with occasional attacks of severe pain in the right ileo-cæcal region, with the usual symptoms attending catarrhal appendicitis; the first attack, in the spring of 1891, was a severe one; he was unable to attend to his business for some six weeks; the second lasted only a few days, and subsequently he had four attacks, each more or less marked; the last he had before coming to Philadelphia was particularly severe, indeed very threatening, severe pain, not only local but extending to the bladder, circumscribed swelling and hardness, constipation, irregular chills and fever; recovery protracted.

The patient's condition during the attack was indeed so alarming that it was deemed best he should seek operative relief. Examination disclosed tenderness on pressure and moderate hardness in the appendix region, and with the history an operation was advised, and two days subsequently a lateral section was made; the appendix was found firmly bound down, as was the case with the cæcum, by adhesions; the organ was tied off as was its mesentery; it measured rather more than three inches in length; it was greatly distended near its middle, and the proximal and distal ends were thickened and swollen; a section showed total obstruction of the organs except its middle or distended portion, which was filled with about two drachms of very offensive pus.

No unfavorable symptoms followed, and the patient returned to his home in Clearfield County, on the fourteenth day afterward, and has been quite well since. It is probable that the thinned pus sac would soon have ruptured into the abdominal cavity.

Mr. G. H., aged thirty-four, of Huntingdon, W. Va., has written as follows:

My first attack, on April 25, 1892, was a severe one; sharp pains in the bowels, intestines swelled and became very hard; felt knotted; continuous vomiting. Relief was obtained only through copious rectal injections and bowels moved on third day; able to be out, though very weak, in ten days.

The second attack occurred about the beginning of June, 1892; pains severe, symptoms same as in first attack, though not so intense. Cathartics acted in conjunction with injections, after about eighteen hours; out in five days.

Next attack was in September; same symptoms as in other attacks, not so severe, however, as the former two. Cathartics gave relief without injection; out in five days.

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*Senior Surgeon Pennsylvania Hospital.

The fourth attack was in December, was severe, in bed a week; cathartics and injection both used; pain worse than in other attacks.

The fifth attack was in April, 1893; the attack was slight, lasting only three days; same symptoms, no injection used, only salts as a cathartic.

The sixth attack was in July, and the symptoms were mild.

Last attack commenced September 20th; was seized with severe pains in the middle of the night; no relief of bowels for twenty-four hours; semi-unconscious at intervals, but whether from the pain or effects of morphia cannot say. Copious vomiting; injections only used; stomach much distended and very hard. Relief came on second day.

In all the attacks morphia was used to ease the pain, and Rochelle and Epsom salts were the cathartics employed.

Early in September Mr. H. reached Philadelphia, much broken down by the series of attacks, especially the one just recovered from; and feeling satisfied that he could not live through another seizure, and there being no question of the appendix being the source of the trouble, a lateral section was made October 6th; on lifting up the cæcum the appendix was found enormously elongated, or stretched, measuring probably seven inches, its distal end was attached far up to the side of the ascending colon; when this attachment was separated the organ contracted to about four inches; it had a continuous mesentary its entire length, which when tied, the organ was excised.

Convalescence and final recovery was slow; after the operation there was considerable pain, no special temperature, but more or less colic, and great trouble was experienced in getting the bowels to act, calomel was at first given in minute doses, this was followed by salts, and the bowel inaction continued for rather more than two days, when relief followed injections of glycerin; more or less pain at times seemed to indicate that the intestines had not regained their normal position, but gradually the symptoms subsided, but not until the fourth week did the bowels act without injection. The suture points and the surroundings of the abdominal wound for the first few days were more or less inflamed and irritable, but no further trouble was experienced; the distention of the abdomen from flatus probably brought about wound and suture tension and the slight surrounding inflammation.

Mr. H. was about the house at the end of the fourth week, and seems quite well, the bowels acting without assistance.

"*Examination of the Appendix, made by Dr. W. K. Walker, of the Orthopædic Hospital.* The tube, which is 3½ inches long, is firm and rigid, so that it can be held by one extremity in the horizontal position without bending in the slightest degree. The vessels of the peritoneal coat are slightly injected.

"The lumen of the tube is narrowed, mucous membrane thickened and found covered throughout with a tenacious mucous.

"Near the distal end of the appendix is found a hardened mass of inspissated mucous and fæces one inch in length and one-sixteenth of an inch in diameter.

"The mucous membrane is everywhere injected, but most markedly at the distal extremity of the tube (for a space of 1¼ inches) in which are seen several punctiform hemorrhages with two of considerable size (about 1-16 by ¼ inch).

"At the point of location of the plug of inspissated mucous and feces are seen two very small necrotic areas (about the size of a pin's head) involving only the mucous membrane, and one of the same size and character, one-half inch from the proximal end of the tube.

"*Microscopical Examination.* A specimen of the mucous placed under the microscope shows an abundance of pus cells with some red blood-corpuscles.

"A section of the tube shows thickening of all the coats, but particularly the mucous, enlarged blood vessels, and in the hemorrhaghic areas, infiltration with red blood-corpuscles."

Of the death rate after operation for appendix excision in the interval between attacks we have no definite information, but recently (October 29th), Dr. W. T. Bull has written, asking for the number of such cases I have operated upon, the number of deaths, and the cause of death; so that we may soon expect to have an estimate of the mortality in this operation; I was only able to furnish Dr. Bull with three cases, all of which recovered; but I am disposed now to consider the operation a more serious one than formerly, for in each instance in the cases I have had under care, unusual difficulties attended the operation, rendering it protracted, dangerous and difficult. Yet I shall continue to advise the excision of the appendix in all such cases associated with a history of chronic relapsing inflammation, as has been detailed in these two cases just reported, as I think the operation in the interval less dangerous than the risk of perforation of the appendix and with the association of septic peritonitis.

SOCIETY REPORTS.

PHILADELPHIA ACADEMY OF SURGERY.

Meeting, November 6, 1893.

Dr. W. W. Keen presented a paper on

GASTROSTOMY BY WITZEL'S METHOD FOR PRIMARY CANCER OF THE ŒSOPHAGUS.

(See page 923).

DISCUSSION.

Dr. **John B. Deaver**: I have been much interested in this satisfactory demonstration. I have performed two gastrostomies, and the difficulty experienced was in preventing leakage. The method which I pursued consisted in exposing the stomach, transfixing the walls and bringing them in contact with the parietal peritoneum, and opening the stomach and introducing a rubber tube or silver canula. I consider the operation described to-night a superior one. In one of my cases an eczematous condition of the skin surrounding the opening was very marked.

Dr. **O. H. Allis**: I would suggest that if, after taking food, this man put something into his mouth and chewed it, digestion would be facilitated and a great deal of dyspepsia avoided. We are all familiar with the experiments of Beaumont, who, by putting sapid articles in the mouth of the subject, could see the gastric juice poured out. Bearing this in mind, I have in many cases of dyspepsia advised the patient to put something pleasant into the mouth after eating, and chew it for twenty minutes.

Dr. **T. S. K. Morton**: I wish to add my testimony to the value of the gastrodiaphane in the diagnosis of tumors of the anterior wall of the stomach. The patient first swallows a couple of glasses of water, and the light gives a beautiful red glow over the whole upper portion of the abdomen. In a case of suspected gastric carcinoma which I saw with Dr. Cohen, on either side of the middle line were seen two curious darkenings which at first we thought might be tumors, but which subsequently were found to be the recti muscles. I do not believe that with the light one could diagnose an ulcer or a minor change of structure, but if there were a gross lesion it would be shown. It also outlines the location of the stomach.

Dr. J. Ewing Mears read a paper on

CLEFT OF THE HARD AND SOFT PALATES

(See page 966)

DISCUSSION.

Dr. **John B. Roberts**: I have been much interested in Dr. Mears' paper. These are the cases in which we want the opinion of an expert, and a man who has seen as many of these cases as Dr. Mears is entitled to the respect that we give to an expert. I have had rather a large number of these cases recently. I see a good many cases in infants at the Woman's Hospital and have been somewhat afraid to attack them. My feeling is that many of these cases are not very satisfactory, and in such young children I have been inclined to postpone operation with the result that many of the cases have not returned. Thrice recently I have operated on hare-lips where there was also cleft palate, operation on which I postponed, feeling that there was not enough bony tissue. I was, therefore, anxious to hear how he manages these cases. The operations on the cleft lip have been somewhat unsatisfactory on account of the cleft alveolus failing to give support to the nose.

In one case I cut through the alveolar process on both sides of the cleft and brought the parts over with a suture as suggested by Wyeth, but that case apparently is not going to do very well. I got the edges closer together, but they did not come in contact. Dr. Bower operated on a similar case using a silk suture, and seems to have gained a great deal. The procedure does not close the palate, but it bring the anterior part together, but of course in these cases no attempt was made to close the posterior gap in either the soft or hard palate. I should be glad to hear what is Dr. Mears' experience in these cases. What does he do where there is cleft palate, with cleft of the lip and of the alveolus?

DR. W. W. KEEN: I am glad to find that Dr. Mears' advocates the operative treatment which, as a rule, is by far the best. In some cases, however, where the cleft has been large I have seen altogether the best results from the use of an obturator, in the form of one made by Dr. Thorington, consisting of soft rubber with a soft rubber and therefore flexible palate.

There is one point on which I would ask Dr. Mears experience and practice. In operating on cleft of the soft palate, I have found no difficulty in securing union, except at one point, and that is where the soft palate joins the hard. The soft palate is very thick from a little above the tip up to near the point where it joins the hard palate. Here it becomes thinner and in some cases almost translucent. In many cases where the rest of the palate has united, there has been left a little opening at this point which I have had to close by a secondary operation or by the use of nitrate of silver or the actual cautery. I should like to know if Dr. Mears has met with the same trouble and how he has overcome it.

DR. R. H. HARTE: Has Dr. Mears tried the operation where one flap is transplanted from one side to the other in complete fissure of the hard and soft palate, and the raw surfaces then drawn together? I think it is known as Davies Colley's method.

DR. MEARS: In reply to Dr. Roberts I desire to say I have operated on cases where there has been a cleft of the palate, cleft of the alveolar process, displacement of the inter-maxillary bone, the bone being turned up sometimes at right angles, with cleft of the lip. My practice has been to break down the inter-maxillary bone and bring it in place after freshening the edges and then wiring the parts together. Where this bone has been taken away, as has sometimes been the case, I have divided the process on each side and drawn the detached portions over, approximating them in the centre. I think that is the only method which can be practiced with any prospect of success. I close the hare lip at an early age, sometimes at two weeks, and later the operation on the palate is performed.

I have called attention in the paper to the point to which Dr. Keen has referred. The difficulty he has had I have had in my earlier operations, and I could not account for it until I made a close examination. I then found that just at the line of junction between the horizontal plates of the palate bone, there was a slight notch, and that was sufficient to prevent union at this point. In these cases I cut on each side and draw a segment of bone over, and in this way I have never failed to obtain union at this point.

I tried the operation of transplantation and closure by periosteal flaps in my earlier work. I have never succeeded satisfactorily with these methods, and, therefore, I have later used the method of Ferguson, making sections on each side and drawing the segments over the middle line. Where the alveolar process is very narrow it is difficult to get sufficient bone to close the gap, and if there is necrosis from splintering the reparative process is less likely to go on satisfactorily, but even when necrosis takes place reproduction of bone may occur.

Many surgeons look upon these operations as the *bete noir* of surgery. They do not like to undertake them. I am glad to say there has been a revival of the operation, particularly in Boston. I believe that the adaption of any obturator is unsatisfactory. I have seen the obturator to which Dr. Keen refers, and I have found that patients complain of the discomfort arising from its use where it is applied to the soft palate. Closure of the hard palate by obturator is easily effected. I have not seen either abroad or in this country any obturator which gave the patient complete comfort, or which I thought as satisfactory as operation which closes the gap.

With regard to the results we all know what they are. I have had some exceptional cases in which the results have been perfect, and I have had a large number in which there has been some improvement, and some in which there has been little or no improvement as regards articulation. I tell patients that a natural tone of voice cannot always be accomplished. This depends a good deal upon the size and form of the pharyngeal and post-nasal space. In some cases the pharynx is very capacious, and when an attempt is made to bring the soft palate in contact with the posterior wall of the pharynx, the space is so great that this cannot be accomplished. In these cases the difficulty in articulation is not entirely removed, and sometimes the difficulty in deglutition is imperfect. In children I have found the greatest benefit derived from the moral effect produced by operation. I think the operation should be done and an effect made to help children suffering from the deformity.

Dr. Keen: I wish to say in regard to the obturator of Dr. Thorington, that although I have not seen it used in many cases, yet where it was used no discomfort was complained of. It has been so excellent that in cases of very large cleft I have rather determined to rely upon it instead of operation.

CORRESPONDENCE.

HOW SHALL THE DISPENSARY ABUSE BE REMEDIED?

In a recent issue of the *New York Medical Times* "A plan to remedy the dispensary abuse" is considered.

The writer recommends that a certain number of physicians, who are so disposed, shall divide New York into districts, and that each one shall voluntarily and gratuitously give his attention to the poor deserving sick, both at his office and at their residences. The physician who registers "must promise never to refuse service." The indigent applicants are to have their names so registered that imposition will be prevented; the patients are to have their medicines supplied free through pharmacies, scattered through the city, supervised by the department of Charities and Correction, etc. It is added by this plan instead of a few large clinics we will have several smaller ones.

While appreciating the motives which inspired the writer of the above, yet, it must be said that in a great city like New York, the scheme is utterly impracticable. There is no reason why the general management of the dispensary system should be disturbed, as all that is needed is that the circumstances of every applicant be rigorously investigated.

But, it must not be supposed that the average charitable dispensary is alone responsible for the present wretched state of affairs. The medical colleges and their feeders are the greatest sinners. Clinical material in shoals is what they are looking for, and that they must have come how it will. Some of our teaching institutions have gone into the daily press and clamored for patients "to attend the free clinic on venereal diseases" by Professor So-and-So. Others have given a free lunch at the noon-day hour and have opened on Sundays so that the poor (?) working people could avail themselves of the free treatment. The house-to-house vaccination by the board of health is an iniquitous practice, and is an impudent invasion by the poorly paid city official into the homes of the family physician's patients.

The ambulance system has been greatly overdone of late years in New York. Rich hospitals keep ambulances ready at a moments notice through the telegraph or telephone, to dispatch to the scene of injury—with the result that New York is so stripped of its traumatic surgery that many practitioners will only rarely even see a common fracture.

Now, what shall be the remedy for this state of affairs? That question is easier asked than answered.

Nothing will at all reach the root of the evil short of drastic measures. First in importance comes *organization*. But, unhappily, of all professions there is none so indifferently united as the medical. Without any stretch of the truth it may be said to-day, that no inconsiderable number of its members subsist through pirating, through a total disregard of all amenities and ethics.

The next measure is *discipline*. But discipline cannot be maintained without a fixed set of rules; or, in other words, a *code*. But codes have become unpopular and a species of Nihilism is rapidly growing in favor.

As a last resort, when all other means fail, then the general practitioners must combine to enforce their demands through such means as special cases require. And in no way can this be more effectively accomplished than through an independent medical *press* and professional opinion. The medical colleges are strongly entrenched behind faculties, which dominate in the manipulation of medical societies and wield a controlling influence in many medical journals. The mammoth dispensaries are strengthened by large endowments, and all with few exceptions are tributaries to the colleges. But the united profession in any city or state, by concerted action can promptly paralyze the most audacious and powerful of them by such methods as will quickly empty their numerous benches. Not by threats and idle vaporings, but by prompt and decisive action. Let the profession prescribe the conditions under which the dispensary patient shall be treated, and watch with a vigilant eye, that they are enforced with rigor. Should any one of these eleemosynary institutions deliberately defy or disregard these restrictions, then there should be no time lost in putting the screws on. Cut off their supplies, withdraw the medical staff or expel from fellowship every member of the profession connected with them. Let this hospital and dispensary building cease, and let those railroad magnates and many millionaires in America, divide their wealth among their poor relations; or with the poor half-starved, destitute, homeless orphan children; among the destitute, helpless aged. But in Heaven's name let them disabuse their minds of the impression that in constructing palatial hospitals, they are in any degree whatever advancing civilization or the interests of an industrious and independent community.

—*Un Avant Courier.*

Definitions of a Baby.

A London paper offered a prize for the best definition of a baby. The last one of the following took the prize:

"The batchelor's horror, the mother's treasure, and the despotic tryant of the most republican household."

"The morning caller, noonday crawler, and midnight brawler."

"The only precious possession that never excites envy."

"The latest edition of humanity, of which every couple think they possess the finest copy."

"A native of all countries, who speaks the language of none."

"About two inches of coo and wiggle, writhe and scream, filled with suction and testing apparatus for milk, and automatic alarm to regulate supply."

"A quaint little craft called Innocence, and laden with simplicity and love."

"A thing we are expected to kiss and look at as if we enjoyed it."

"A little stranger with a free pass to the heart's best affections."

"That which makes home happier, love stronger, patience greater, hands busier, nights longer, days shorter, purses lighter, clothes shabbier, the past forgotten, the future bright."

"A tiny feather from the wing of love, dropped into the sacred lap of motherhood."—*Medical Brief.*

No False Modesty.

Lady—This is the second time you have received food from me, isn't it?

Tramp—It is, Madame; and you are at liberty to mention the fact to your friends, if you wish.—*Puck.*

There are now fifty-five towns and cities in England which destroy their garbage and solid refuse by burning, and 570 furnaces are employed for this purpose. In many cases the heat from these furnaces is used to produce steam, and the power is employed in pumping water and running electric light and power plants, and for other purposes.

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SATURDAY, DECEMBER 23, 1893.

EDITORIAL.

N. B.

Beginning with the new volume, the subscription price of the MEDICAL AND SURGICAL REPORTER will be reduced to three dollars per year. There will be no other radical change. The REPORTER will maintain all of its present distinctive characteristics, and make every effort to further enhance its value to the medical practitioner. In a word, the REPORTER as hitherto sold for five dollars will hereafter be sold for three.

This change has long been under consideration and we believe that the present "tide in the affairs of men" is that "which taken at the flood leads on to fortune." Note the signs of the times: A great and progressive profession is demanding frequent and trustworthy information of all that is doing or making in the medical world, without the necessity of wasting valuable time and needed resources in blasting out what is of value from innumerable and often questionable journals—and there is a stringency in the times that makes every dollar received in cash by the physician appear to be worth two hundred cents. To meet these conditions is a weekly journal of established reputation and success, owning its own plant, buying supplies direct from the manufacturer, saving all profits of middle men, thus largely reducing the cost of production; ambitious to reach every intelligent physician in English-speaking countries; determined that every issue shall contain some thing of present value to every reader of its pages; whose columns are not made up of advertiser's reading notices; which believes that there is so much of value in medical science that it will spare no space for unnecessary professional or personal disputes, nor for the discussion of subjects which are unprofitable unless strictlyscientific; which receives contributions from all sources and makes due return for such as can be made use of.

No other first-class medical weekly journal has dared such an undertaking. It requires faith to voluntarily surrender two-fifths of one's income and discount the future, but the REPORTER can confidently give reasons for the faith that is within it. The REPORTER is one of the oldest medical weekly journals in America. From its inception it has received a cordial and hearty support from the profession. It has kept faith with its subscribers, and honestly earned the position of influence and authority it now maintains. Forty years ago the REPORTER had few competitors in the field of medical journalism. Now it requires a microscopic search to discover "any long felt want" that can serve as an excuse for a new journal. The very last "need" is now met by the REPORTER—a strictly first-class medical weekly at a price obviously within the reach of every medical practitioner determined to be abreast the times in his profession.

TRANSLATIONS.

IN CHARGE OF M. B. WERNER, M. D., AND W. A. N. DORLAND, M. D.

CONTRA-INDICATIONS AND INDICATIONS FOR SEA-BATHING IN CHILDREN.

Sea baths which produce a remarkable effect in certain children, writes Dr. J. Simon, (*Revue Medicale*, June 25, 1893), are very harmful in others, for example, in rheumatics and in nervous children. When one has employed the sea bath at random in many nervous children from the experience thus obtained formal contraindications may be laid down to their employment. Simon says that it is a mistake to give a cold sea bath to children under two years of age. Of course there are exceptions to this rule, but in general they are very badly impressed by cold water, and, as aged persons, do not react well. The sea bath is also contraindicated in nervous children, those who are called irritable, in children who are incessantly in excitement, in those whose intelligence is continually alert, whose sensibility is exquisite and whose sleep is light. Sea-bathing increases the excitement of such children, diminishes their amount of sleep, and renders them absolutely unbearable. Epileptics, hysterical children, and those with chorea are equally badly influenced by sea-bathing. In such, the crises which have disappeared while far from the sea-coast, invariably return after sea bathing. Sea bathing and bathing in water in the vicinity of the sea are alike sufficient to produce the phenomena of cerebral and spinal excitement in children affected with cerebral sclerosis and paralysis. Rheumatics, with or without cardiac lesions, children subject to torticollis, and to the so-called growing pains ought not to be taken to the sea-shore. Acute and chronic ophthalmia, diseases of the ear, and all of the cutaneous affections are contra-indications to sea-bathing; also pulmonary tuberculosis in its incipiency, and most of the pulmonary diseases and kidney troubles are harmfully influenced by it.

Sea bathing seems to the author to be indicated in certain forms of tuberculosis, notably in the adenopathies, the arthrites, and in Pott's disease. The indication for sea bathing is especially absolute for the subjects of rachitis, who find themselves marvelously benefitted at the sea-shore. It is also advisable to carry to the shore children convalescent from grave diseases, those with anemia and chlorosis. Arrived at the sea-shore the children should rest for from five to six days before commencing the baths; the first bath should be short, not lasting more than a few seconds, and even when they have become accustomed to the bathing they should not remain in the water more than five or six minutes.—D.

ABSTRACTS.

THE MORAL IMBECILE.*

DR. I. N. KERLIN, ELWYN, PA.

An experience of thirty years in the care and training of feeble minded children has brought to my observation a group of cases quite distinct in their symptoms of derangement, and requiring forms of discipline quite unusual as compared with those applicable to the children ordinarily recognized as idiotic. Two of these, studied twenty-five years ago, have been followed by experiences with others, so that now in a population of 740 inmates we differentiate 16 as belonging to this special group and 90 others who merge into it.

Besides these who have been under daily study and discipline, many more have been brought to our knowledge through correspondence,—a correspondence revealing the agony and unrest of as many homes, caused by the baneful and incomprehensible misconduct of certain children in whose interest the most pathetic appeals have been made.

The symptoms marking the diseased lives of these scores of children have been confined either mainly or entirely to aberration of the "moral sense," with either no deterioration of the intellect or, if slight, such as could be considered secondary only. These phenomenal disorders have dated from temper explosions, night terrors, and most remarkable obstinancies observed in infancy and early childhood, or may have originated in a marked and well-remembered febrile attack, associated with some infantile disease and accompanied perhaps with convulsions, or, more rarely, may have followed a markedly nervous and precocious youthhood too suddenly reaching a serious climax at puberty. The fundamental disorder is manifested in derangement of the moral perceptions or emotional nature rather than in the intellectual life, which not infrequently is precocious. Unaccountable and unreasonable frenzies, long periods of sulks, and comfort in sulking; motiveless and persistent lying; thieving, generally without acquisitiveness; a blind and headlong impulse toward arson; delight in cruelty, first toward domestic pets, and later toward helpless or young companions; self-inflicted violence, even to pain and the drawing of blood; occasionally, delight in the sight of blood; habitual wilfulness and defiance, even in the face of certain punishment; a singular tolerance to surgical pain and hebetude or insensiblity under disciplinary inflictions,—these are some of the forms in which the congenial deficiency of the moral sense evidences itself. It is hard to answer, "What is there in all this to distinguish from simple wickedness or badness?" unless the answer is contained in the persistency of the trait and the utter destitution of any reason for it, as is indicated in the confessed helplessness of the child to do differently. As a further aid to the diagnosis, we may refer to the fact that in one class of these cases the conduct is the reverse of what might be expected from the environment in which the child has developed; or, on the other hand, the ancestral and prenatal history of the child is such as to project a strong light for the interpretation of this condition as that of a neurotic inheritance.

Of the several children observed at Elwyn, quite frequently they are of faulty stock, presenting the gravest statistics of inebriety, epilepsy, acknowledged insanity, and in some instances even crime.

During the thirty years' contemplation of the subject, a marked change in professional opinion has been noted, so that it is no longer hazardous to reputation to believe in the existence of a condition termed "moral insanity" nor to refer to it as of commonly congenital origin, and hence better denominated "moral imbecility."

In Germany, both the legal and medical professions accept quite unanimously the doctrines of moral imbecility. The most enlightened minds of England have embraced them, and, many in America are their advocates.

A distinguished judge of Pennsylvania has so far amended his habit of thinking as to agree with an eminent English judge who, "after many years of constant administering of the criminal law, was compelled to admit that, in a large majority of cases brought up for sentence, he himself would have committed the same acts if he had descended from the same stock and been subject to the same surroundings in early life"; and so far has this former gentleman progressed in this, to him, new line of thought as to have added: —

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*Reprinted by request, from the 17th Annual Report of the National Conference of Charities and Correction, held at Baltimore, 1890.

> The helpless classes — lunatics, imbeciles, and criminals—all call for our sympathy as well as our care. They are all to a greater or less extent the victims of circumstances from which the more fortunate humanity escape. There is no sharp dividing-line between these three. The ranks run into one another, and the individuals are readily interchangeable from one rank to the others. There is a moral defect in all of them, often also a physical defect. Call it moral insanity, or what we will, it runs throughout all moral imbecility, the helpless classes, and is the main element in their helplessness. Being unable to govern themselves to the extent required by the public good, it is our duty to govern them, and that without unnecessary harshness or cruelty.

Confirming testimony of these views was most abundantly given at the recent Second International Congress of Criminal Anthropology in Paris, at which were assembled distinguished representatives of science, law, medicine, and the administrative world, from France, Italy, Russia, Holland, Belgium, the United States of America, Denmark, Sweden, Roumania, Servia, Brazil, Mexico, Peru, Paraguay, and Hawaii. Sentences were there uttered so replete with originality, and so applicable to the subject we treat, that to quote them, even in the most abridged terseness, will give this paper its best value. Brouardel said: "It has been to the honor of the Italian school, in the land where Roman law, the foundation of all law, was born, that it has again put into the crucible the problem of criminality, and that it has proceeded to the analysis of that problem by the only truly scientific method, by studying the psychology of criminals, and their pathological abnormalities. It will be its distinction to have declared against illusory enthusiasm, and to have founded a science which will contribute to the more efficacious protection of society."

Lombroso, another leader of the Italian school, "summarized what he believed to be the most important abnormal physical characteristics found among criminals,—the presence of cranial and fascial asymmetry, precocious synosteosis, unusual frequency of left-handedness, large orbits, prominence of the zygoma, large median occipital fossa. These characters, he considered, were all due to pathological causes."

Lacassagne pointed out "the too often forgotten factors of misery in the production of crime," but added "that he meant not social misery alone, but physiological misery of which the origin was intra-uterine."

Benedickt, the Russian, with the forcible language born of elaborate examinations of the brains of criminals, "declared the criminal to be a diseased person or a lunatic, in whom we must consider the molecular troubles of the cerebral substance as well as the external signs."

Garofolo, an eminent Neapolitan lawyer, said, "Criminal law must be treated as a detached and isolated science: it must be subordinate to psychology and anthropology, or it will be powerless to interpret and determine, in any enlightened legislation, the true classification of criminals."

M. Ferri summed up an able paper on the "Determining Condition of Crime" with the conclusion "that we must on the one hand ameliorate social conditions for the natural prevention of crime, and on the other hand exercise measures of temporary and perpetual elimination of individuals, according as the biological conditions in each case seem more or less curable."

M. Alimena attached great importance to education, especially its hereditary influence: "The criminal ought not to be able to say to his judge, 'Why have you not made me better?'" He agreed with the words of Lacassagne at the first Congress, "Societies have the criminals they deserve." M. Taverni had made a number of investigations on children in reformatories,—a study which he called pedagogic biology,—and had traced backward the childhood of criminals, and forward the career of unpromising children. The chief indications he had found in the childhood of criminals were inaptitude to education, resistance of family order, and revolt against social conventionalities. Among adult criminals are found in their childhood the same characteristics of inaptitude and resistance. M. Magnin, with a corresponding large experience, said, "The child is already often a complete criminal, as the result of physical and moral degeneration due to nervous, insane, or alcoholic heredity."

But nearer home we find apt delineations "moral imbecility." Lyman P. Alden of the Rose Orphan Home, Terre Haute, Ind., in his second report, and as his summary of experience covering many years, speaks of a group which he has encountered in his reformatory work, as follows:—

But there is a third class for whom little can ever be done. Congenital and hereditary evil propensities are so powerful that all human agencies are too weak to cope with and arrest them. With now and then an exception, they are the children of degenerate parents, the consequences of whose sins they are now bearing. Not every child of evil parents will be bad, by any means, any more than every child of good parents will become good. But the strong tendency is all that way, as every intelligent, observing superintendent of children's institutions must have observed. These are the children that, in spite of all our efforts to rescue them, will finally go to swell the class of prostitutes, paupers, and habitual criminals. Love, kindness, rewards, encouragements, warnings, entreaties, and punishments are equally ineffective, except as temporary restraints. The vileness and evil that are packed in some of them would be incredible to those who have never become acquainted with this class. What shall be done with them it is hard to say. Sent back to their homes and old associates, their downward course is rapid. To place them with nice families is an imposition on the families, unless they are informed of the facts ; and then few would take them. Whenever institutions have sent such children out to homes, they are soon returned, worse than ever. To keep them in the institution endangers the morals of the other children as well as its peace, harmony and good order. But, fortunately, of this hopeless class there is not a large number, less than five per cent. ; and, if at last they fail to become good citizens, it cannot be charged against society that they never had any chance.

And again, before this body at its meeting in St. Louis, in 1884, Dr. J. D. Scouller described with prolific illustrations this third class of the reformatory population, "as the boys will make our criminals, who will be our law-breakers ; the boys who love the world, the flesh, and the devil ;" those of whom Solomon says, "You may bray them in a mortar among wheat with a pestle," but you will only damage the wheat. Their souls are as impressionable to gratitude as the granite slab to the rays of the sun. They are always innocent of the crimes charged against them. He correctly says : "They are not all from the criminal ranks. We find on examination that there may be perhaps twenty per cent. from respectable and well-regulated homes, thirty per cent. from the careless, undisciplined, but not necessarily criminal families, and fifty per cent. from the criminal classes of society."

Ladies and gentlemen, if we would come to the conclusion that we have a class of little children whose heredity and aberrations are such as to make them the predestined inmates of our insane hospitals and jails, what an advance we would make in the diminution of crime and lunacy by a methodized registration and training of such children, or, these failing, by their early and entire withdrawal from the community !

Instead of so much interest being centered about the seventy-five per cent. who are discharged annually from your refuges, alleged to be reformed and fit for society, a no less interest would be discharged on the black residuum of 25 per cent. who are also discharged, to be as yet unaccounted for in the statistics of refermatory work, but, pariah-like to add a contribution of evil to society which will shadow, if not eclipse, the accredited value of our whole reformatory work.

Cannot an almost unerring decision be made by the trained and humane experts of our asylums, jails, and reformatories, by which the indeterminate sequestration, under the best conditions for their moral and physical welfare, shall be the practice of those who are congenitally unfit to mingle their lives and blood with the general community ?

The various Ladies' Aid Societies of

the country, the associations for the protection of children from cruelty, and many other organized charities, are all working in the right direction, in gathering out from unfit and barbarous homes the ill-bred and misbred nervous children of coarse and brutal stock; for it is now quite recognizable that a drunken or criminal parentage is not fit to rear its ill-gotten progeny. But it is less recognizable that a fussy parentage is ill qualified, too, for the training of its nervous over-sensitive, and spoiled progeny. The societies referred to are doing their utmost primarily to domicile unfortunate children in private and considerate homes, and, unsuccessful in this, to endow our foster homes, refuges, and institutions for the defective with a liberal clientage. It is only a step farther to analyze this heterogenous mass into "curable" and "incurables," and to restrain the undue haste in thrusting the incurable out upon a world for which they are utterly unfit, where they poison and contaminate as many more, and, after taxing society with their prolific and indiscreet reproduction, are drifted at last into poorhouses, jails, and hospitals of the commonwealth.

The practical thought I have to offer from this is: let us recognize "congenital moral imbecility" as a terrible fact.

Let us accept this moral imbecility as the incurable infirmity of an irresponsible victim, to whom, as the piteous cross-bearer of the sins of society, we owe kindly nursing and protection against himself by a grateful and total withdrawal from the community, which, in its turn, has a right to demand that he shall not scathe our common stock with permanent taint in blood and *morale*.

Let us widen our thought so as to include under the great generic class of imbecility not only the accepted physical and intellectual forms, which are now so obvious, but also this sadder and more dangerous group, which, neglected and misunderstood because of our ignorance or hardness, is sapping our mental and moral vitality.

And, as a further practical suggestion, I wish to add that any general State institution for the care of the feeble-minded should embrace a department for the care of the *moral imbeciles*. They can be indentured to work. They can, so far as their stolid natures will permit, be best dra[illegible] sympathetic relations by contac[illegible]elpless idiocy, and be made to [illegible]ute toward its nourishment. T[illegible] need not necessarily be taught to read and write; for the school, as ordinarily kept, contributes to their deterioration. Intellectual entertainment for these people is best provided in the exercises of the [illegible], the field, and garden. They tak[illegible]y to theatricals, base ball, cornet, [illegible]stral and vocal music; and these, [illegible] kindred amusements, should be the indulgences granted for good behavior and for the uplifting and general "good of all." I trust there are some—yes. many—in this Conference who may see in these suggestions a line which followed will lead to the relief of many of our institutions, to a better understanding of this worst form of moral perversion, and to a partial arrest of the apparently increasing degradation of our race.

CHILDREN should be trained to eat slowly, no matter how hungry or what important business is pressing. Much safer a little food well ground than a hearty meal swallowed in haste. Cold food is even more difficult to digest than hot, if taken too rapidly. The normal temperature of the stomach is about ninety-eight degrees; food has to be raised to this temperature before digestion can take place.—*People's Health Journal.*

DR. MARY A. SUGANUMA has been granted permission by the Japanese Government to practice as a physician in Nagasaki. Dr. Suganuma is an American woman who was graduated from a medical college in Ohio. She became a Japanese subject, on her marriage with Mr. Suganuma, a government official in Osaki. Dr. Suganuma is the first woman physician permitted to practice in Japan.
—*Boston Woman's Journal.*

I have oft heard people say,
"O wad some power the giftie gie us"—
(Quoting from an old Scottish lay)
"To see oursels as other see us."
But I would far more happy be
If some fairy, witch or elf,
Would make the other people see
Me, just as I see myself.
—*H. Dodge Tichenor, in Life's Calendar.*

THE THE[illegible]TICS OF CROUPOUS PNEUMONIA.

Dr. Larrabee, (*Jour. Amer. Ass.*) says:—In the discussion of the therapeutics of cropous pneumonia, I recognize the importance of tabulating only those means which through a long period of time have proven [illegible]e in the hands of the writers. The [illegible] of papers of this kind, is in direct p[illegible]rtion to the truthfulness of the statement therein contained, and to the careful clinical observation and and experience of the author. In treatises designed for text-books, it is quite proper that all the known therapeutics, both practical and speculative, should be compiled, the endorsement of which is not made by the author and little of which has been the result of his experience.

I shall, therefore, make no attempt to enumerate the so-called remedies for this disease, however much extolled by others, nor shall I criticise those which in the experience of others have been valued. I recognize various therapeutic roads leading to the same desired terminus, and I care as little what means may be employed by others equally skilled, as I would to know with what tools a carpenter has completed my house, if he has completed it according to the plans and specifications.

Regarding pneumoniæ crouposæ as an acute, infectious disease, running a definite and limited course with a pronounced tendency to recover by natural processes alone, I might be expected to say very little concerning its therapeutics.

Notwithstanding the fact that medicines are powerless to cut short the disease, and the conviction expressed that very many will recover without any medication, few physicians possess a clientele of sufficient intelligence to risk a trial.

For this reason, as well as to favor the course of nature in repair, I constructed the following prescription some twenty years ago, since which time I have made it the sole treatment from the beginning to the close of the attack.

Moreover, it has been given as a part of my instruction to medical classes for nineteen years, and it is safe to say that at least a thousand practitioners have made it their chief reliance and have so expressed themselves to me by letter or person.

The indications—therapeutical—which are met by their combination are:

1. Satisfaction on the part of friends, that something is being done for the patient.
2. The satisfaction on the part of the practitioner that he is not doing harm to his patient.
3. The promotion of diuresis.
4. The promotion of diaphoresis and increased elimination of carbonic acid with reduction of temperature.
5. Increased alkalinity as shown by urine and a lessening of fibrin in the blood, promoting free mucous secretion and lessening the tendency to coagulation of blood.
6. Gentle, but diffused stimulation of the nerve centers, favoring sleep and preventing spasm.

℞ Spts. eth. nitrosi.
Potassæ. acet. ....āā—ʒjss
Spts. mindereri ....
Aquæ. camphoræ .... āā ℥iij

To be left with slightly acid reaction as shown by litmus. M. ft.: Adult, dose, tablespoonful; child, dose, teaspoonful, every two hours.

To this may be added tr. aconit or veratrum if needed, and in convalescence tr. ferri chloridi. Such additions always to be made as extra doses and not a part of the prescription.

Death approaches the sufferer from croupous pneumonia always through the heart. For this reason it is of the utmost importance to watch this organ, from the inception to the close of the disease. With the trained finger upon the pulse and the educated ear over the precordia, we catch the first signal of danger. To be forewarned is to be forearmed. Nothing is more essential to the cardiac therapeutics than a knowledge of the mechanism of heart failure in pneumonia. *Pari passu* with the consolidation of lung and in direct proportion to its extent, we have a mechanical obstruction to the transfer of blood from the right to the left heart, and added thereto the addition of carbonic anesthesia to muscle and frame. This occurs at a time when ptomaines from vegetable diplococcus are in circulation and before the anti-pneumotoxin has been formed in the albumen of the blood. More blood is coming into the right auricle than can be forced through the lung by the ventricular stroke. The right ventricle becomes so distended that the apex beat is completely removed from its original site, between the fifth and sixth ribs, and the ear placed over the heart detects a heavy dull sound, while percussion reveals an increased area of dullness. In this condition the indications for improvement in the circulation become extreme and pressing. How shall this be best accomplished? It is philosophical to attempt relief by a vis-a-tergo, or is it more rational to attempt a vis-a-frontis? Are these the indications for the employment of digitalis? It may be a good plan to goad the tired ox that has fallen in the furrow if you want a little more work, but you will kill the ox. It may be good therapeutics to stimulate a diseased kidney if you want a little more urine, but you will have a little less patient. It may be good practice to give digitalis to a fagged out heart in the stage of hepatization of croupous pneumonia, but I doubt it. Digitalis stimulates a weak heart by contracting the arteries and arterioles, by throwing the blood back upon the heart itself, and where there is no pulmonary obstruction the action is prompt and efficient, as in valvular patulences, etc., but the very condition which is killing the patient in pneumonia would be rendered still more dangerous by such an agent. Our fathers did eat manna in the wilderness and they are dead, but is it strange that venesection should occur to the mind as a possible solution of the question? Experiments in venesection have demonstrated that a heart brought to a standstill in such diastole may be revived by aspirating the right ventricle.

It has been ascertained that even ligation of the lower extremities just sufficient to prevent the return of venous blood, is followed by immediate relief to the heart. In the same manner is the explanation of the sense of relief felt by the patient upon the application of dry cups and hot flaxseed poultice to the chest walls. Pediluvia would also prove of service, were it not for the ever present danger of assuming the erect position.

Notwithstanding it comes to us as a voice from the past, there is to-day much truth in the statement that "blood-letting is good in pneumonia." Bleeding and tartar emetic marked the heroic treatment of the sturdy yoemen of the early nineteenth century, and yet we find from statistics that the mortality for 1822 to 1832 was 10 per cent., while from 1880 to 1890 it was 18 per cent.

Without attempting to revive a therapeutic so long abandoned and so universally condemned, it must be admitted that those old-time doctors struck some underlying principle in therapeutics which we, with all modern accomplishments, have failed to recognize. That principle was the relief of the over-burdened heart. I propose, therefore, to demonstrate how this same desirable end may be obtained without jeopardizing the life of the patient and without inflicting upon him a long and tedious convalescence.

I.—By agents which determine the blood to the skin. This may be accomplished by the warm pack, which, applied at a temperature of 98½°F., and protected by light woolens, envelops the body in an atmosphere of steam. By this means the peripheral nerves are soothed and almost invariably this procedure is followed by quiet sleep.

II.—By belladonna. This time-honored and faithful servant of materia medica is too often lost sight of in practical therapeutics. It has a place in all hyperpyrexias accompanied by paleness of the skin and in low stages of fever. It is particularly adapted to the condition under consideration, being an indirect stimulant to the heart, diminishing the blood pressure by dilatation of the capillaries. It is also a stimulant to the respiratory centers of the brain, thereby inducing a more perfect æration of the blood. The comparative harmlessness of this remedy in infancy and early childhood enables us to push it quite up to its toxic effects. It has done me yoeman's service in many an apparently hopeless case of threatened cardiac failure in pneumonia.

III.—Nitro-glycerin and the nitrites may be expected to rescue a heart after the manner of aspiration, taking off the pressure and flushing the skin, even when brought to a standstill in the diastole of a full right ventricle. Aconit and veratrum viridi certainly have a place in the treatment of pneumonia; the former, being a sedative from the start, is too dangerous for administration by continued dosing; the latter is safer than digitalis. Fothergill's statement that "digitalis is both spur and oats to a heart," is preëminently true, and in low forms of fever where the adynamia is due to long-continued hyperpyrexia. I have attempted to show that the mechanism of cardiac failure in pneumonia has its foundation in an entirely different pathology. I have been led to these conclusions by clinical observations and not by theory.

Finding that in this disease alone I failed to obtain the usual slowing and filling of the pulse in the radial artery, I began to investigate the cause of the failure of this grand old drug so generally serviceable in crippled hearts.

Alcohol will prove a far better cardiac stimulant in pneumonia, by reason of its power to dilate the capillaries, thereby retaining more blood in the skin, while at the same time it may have some value as a respiratory food.

IV.—Applications to the chest. The feeling that something may be accomplished, at least for the comfort of the patient suffering with pneumonia, by local applications to the thorax is universally believed by the laity. No doubt this idea had its origin in individual experience in many painful diseases. Shall they be cold or hot, moist or dry? Heat is a stimulant and cold is a sedative. Heat relieves pain under any and all circumstances. Heat locally applied is a powerful stimulant to the heart, and, by its action upon the vaso-motor nerves, lessens active hyperemia of the brain.

Physiologic experiments made upon the heart of a frog show that pulsations may be restored after a complete cessation by the application to this organ of a bit of cotton wrung out of very hot water, but they are again arrested by the application of cold. I prefer warm to cold applications, although some authorities, particularly Germans, speak favorably of cold, and even ice packs in the treatment of pneumonia. The choice is between poultices and cotton batting, protected by oil silk.

Those of us who have experienced the relief of a congestive headache by a warm foot bath containing mustard, are best prepared to answer this question. Is it probable that the same relief would follow putting the feet in cotton batting instead of hot water? Poultices are rarely properly made and seldom properly applied. Moreover, they are, at best, a very clumsy application, and by adding weight to the chest walls embarrass still further the labored respiration. A towel wrung out of very warm water wrapped once or twice around the chest and neatly covered by oiled silk is a far more elegant and comfortable application.

By this means the entire thorax is surrounded with an atmosphere of equal warmth and moisture, the superficial vessels are dilated, pain is relieved and repair hastened. Stimulating embrocations are also of benefit and are useful in proportion to the chronicity of the case. The following prescription is a favorite of mine:

℞ Ol. succini rectificati.............. ℥ss
Ol. caryophyli...................... mxx.
Liniment saponis.................. ℥iiss.
M. ft.

Cough is a constant accompaniment of pneumonia. At first dry, frequent and distressing, it soon succumbs to consolidation of the lungs and returns with commencing resolution. This return is hailed with pleasure by the physician and with unnecessary alarm by the laity. Perhaps it is the latter observation which has led to the employment of expectorant mixtures, most heterogeneous in composition and most therapeutically incompatible in application. These mixtures generally contain the entire list of so-called expectorants in the materia medica. Ipecac and squills to loosen, senega and ammonia to stimulate, wild cherry and other tannates to check secretions, alkalies to lessen viscidity of mucus and opium to benumb sensibility. Some of these prescriptions are a pharmaceutical curiosity. Yet one meets with them with such frequency in consultation practice that it would appear that reform in this direction is making slow progress. Such mixtures do little more than destroy the appetite and disgust the patient. Water, given in abundance, and at short intervals, is the best expectorant required. In cases of children, about the time of crisis of pneumonia with restlessness, cold extremities and pinched features I have seen great good from tincture of assafetida with whisky toddy. As a protection to the chest during convalescence a neatly fitting vest made of one layer of carded wool or absorbent cotton quilted and covered by oiled silk should be worn upon the chest.

It is probably the observations of others bedsides myself, that purgatives administered during the stage of hepatization of a lung are bad. I have so often been called to cases made worse by the officiousness of some grand-dame, whose desire to purge amounts almost to insanity, that I am able to detect such interference by the collapse that has followed. I can give no explanation other than that purgatives add to the general depression at a time when the child is poorly able to stand it. If the bowels need attention they should be moved by simple enematæ.

The enthusiasm for the treatment of high temperature so popular a few years ago, has, in a large measure subsided, and it may now be said that thermometric observations are less liable to plunge us into therapeutic errors than formerly.

I have never participated in this "Don Quixotic" fight of temperature, to the extent of allowing it to control my therapeutics, but have been content to treat hyperpyrexia alone, and always in relation to other existing symptoms.

In catarrhal pneumonia I am guided altogether by respiration ratio; in croupous pneumonia by the pulse ratio as compared with temperature.

It is exceedingly rare that I find a hyperpyrexia which does not yielded to the warm bath or the warm pack, which I greatly prefer, and to the "tubing coils," known as my invention.

Some danger always attends upon the patient suddenly assuming an upright position in pneumonia, on account of the sudden strain placed upon the heart. I have more that once seen an immediately fatal result following such a procedure. Hence the preference of the pack to the bath. As I grow older in the profession and more experienced in practice, I am less courageous in the use of heroic measures. I must confess to a timidity in the use of the socalled antipyretics known as the coal-tar products or derivatives so highly praised by many excellent physicians. Reduction of temperature, however desirable, ought not to be purchased at the expense of de-oxidation of the blood in pneumonia.

CEREBRAL SYMPTOMS.

Previous to the investigations of Sternberg and Frankel and the discovory of the diplococcus or pneumococus of Friedlander, cerebral pneumonia admitted of no rational explanation. Various theories, in themselves ingenious, were made to account for the intense cephalalgia in adults, and for the initatory convulsions of croupous pneumonia in infancy and childhood. It was at one time thought that cerebral manifestations were more frequently associated with apex consolidation and I, myself from observation, was inclined to corroborate this statment.

Prof. J. Lewis Smith recording his own valuable experience during an epidemic of cerebro-spinal meningitis in 1872 in New York city, makes a special mention of the great increase in the number of cases of croupous pneumonia prevailing at the time. He evidently recognizes a pneumonic from cerebro-spinal fever. I have many times witnessed the recession of typical cerebro spinal symptoms *pari passu* with the development of consolidation of the lung. In infancy these cerebral symtoms, marked by convulsions and vomiting, are so common an accompaniment of croupous pneumonia that one is never warranted in pronouncing upon meningitis without a careful examination of the chest. I am convinced that nothing but clinical experience will prevent young practitioners from making this serious error, so completely do the brain symptoms overshadow those of the pneumonia. In etiology, however, they do not differ from the symtoms produced by alkaloidal products of the microorganisms — toxalbumins — in other disease circulating in the blood, e. g., scarlatina, smallpox, measles and typhoid fever.

So soon as the characteristic lesion of these diseases becomes established, these so-called brain symptoms subside as rapidly as they came. With this etiology it is scarcely possible that one will be found administering drastic cathartics or applying leeches to the scalp. Bromids and chloral are also of doubtful propriety.

The warm bath, the warm wet pack to the chest and tubing cap to the head, is almost certainly followed by relief, quite sleep and by reduction of temperature, which is also a factor in disturbances of the nerve centers by no means to be lost sight of in our therapeutics.

So long ago as 1880, in my lectures, I stated that the sudden and remarkable change which occurs usually from the fifth to the seventh day, known as crisis must have some other explanation than the subsidence of inflammation. Auscultation and percussion so frequently revealed no improvement which could reasonably account for such a change; for days after convalescence was established the local lesion could be readily demonstrated.

The study of the micrococcus pneumoniæ crouposæ and its product, pneumotoxin, has led to the discovery of a so-called anti-pneumotoxin, supposed by the celebrated German scientists, the Klemperer Brothers, to be antidotal to the former. The opening of this window certainly throws a flood of light into a dark recess. Should the fond expectations of these earnest investigators prove true, your patience will not be burdened in future by lengthy papers upon the therapeutics of croupous pneumonia.

The sick will be made to cure the sick, and the physician, armed with his hypodermic syringe, will act as a mediator between the two. Unfortunately, however, for all these beautiful theories which comet-like, dart across the medical sky, dazzling our vision, they are soon lost below the horizon, leaving us to "darkle in the trackless void."

In diseases which secure an immunity against a subsequent attack, we have a right to expect much from inoculation. Pneumonia in so far from securing exemption from future attacks, predisposes to them, and this has been the observation of physicians from time immemorial the world over. I have in my practice a patient who has had croupous pneumonia seven times in six years and whose life has been in jeopardy several times.

In conclusion, permit me to say that, while the majority of cases require little medicinal treatment, the successful practitioner will be on the alert to detect constitutional and hereditary weaknesses, in his little patients. The importance which attaches to diathesis can not be over-estimated. Pneumonia in a rachitic infant carries with it a far more grave prognosis than in a healthy child.

The strumous and tubercular diatheses entail a series of consequences peculiar to each. Delayed resolution in the lung and enlargement of the bronchial glands, indicate the use of potassium iodide and muriate of ammonia, with the daily application of tincture of iodin to the upper portion of the thorax.

Cod-liver oil with marshmallow emulsion, and the elixir lacto-peptine with tincture ferri chloridi and gentian have proven to be excellent reconstructive tonics.

Incubation.

Diphtheria, two to seven days; oftenest two.

Typhoid fever, eight to fourteen days; sometimes twenty-three.

Influenza, one to four days; oftenest three to four.

Measles, seven to eighteen days; oftenest fourteen.

Mumps, two to three weeks; oftenest three weeks.

Rubeola, two to three weeks.

Scarlet fever one to seven days; oftenest two to four.

Small pox, nine to fifteen days; oftenest twelve.

Further investigations were made with regard to the time and duration of the infective period.

Diphtheria was found to be infective during the period of incubation, attack and convalescence.

Mumps and rubeola are also infective for three or four days before the onset of the parotiditis and appearance of the rash.

The contagiousness of measles speedily disappears, and does not continue in disinfected persons for over three weeks.

Typhoid fever is infectious from the time of onset until two weeks after the fever has gone and convalescence set in.

As is well known, the contagiousness of scarlet fever varies greatly, but is generally continued a very long time—certainly until desquamation ceases, and sometimes as long as eight weeks.

If you don't want to be detested don't be a chronic growler.

The reason those people succeed so well who mind their own business is because there is so little competition.

Publisher (testily) — I can't see anything in that article of yours.

Author (vindictely)—I suppose not, but you may have some readers who are blessed with common intelligence.

THE LIBRARY TABLE.

BOOK REVIEWS.

A Chapter on Cholera for Lay Readers: History, Symptoms, Prevention and Treatment of the Disease. By Walter Vought, Ph. B., M.D., Medical Director and Physician-in-Charge of the Fire Island Quarantine Station, Port of New York; Fellow of the New York Academy of Medicine, etc. Illustrated with Colored Plates and Wood-Engravings. In one small 12mo volume, 110 pages. Price, 75 cents net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This little book, destined to circulate among the laity, is replete with useful information, presented in a readable manner, and if carefully noted will no doubt achieve its purpose, by teaching many in aiding those so unfortunate as to be attacked by the disease, where the much needed element of rapid action often turns the scale in the direction of a life saved.

Recent Developments in Massage, Historical, Physiological, Medical and Surgical. Douglass Graham, M. D. Physicians Leisure Library. G. S. Davis, Publisher.

The author presents a concise book on the subject of massage, intended, he states, to be a supplement to his Treatise on Massage, issued in 1890. The chapter devoted to the physiological effect on muscle tissue contains useful hints, based upon experiments and experience, showing, that, by its use one can look for an improvement in nutrition, hence it will often counteract the effects of excessive fatigue, as well as prove useful in a great number of affections which are largely dependent upon faulty circulation, nutrition or excretion. There are useful suggestions in the nine chapters devoted to the practical consideration of its application to various diseases.

Cholera—Its Protean Aspects and its Management. Dr. G. Archie Stockwell. F. Z. S. In two volumes. Physician's Leisure Library. G. S. Davis, Publisher.

The author treats his subject with studious care. He is careful to avoid any enthusiasm which might lead astray from not only scientific study but research into the history of this dreaded scourge. His views upon bacillar pathology are best given in his own words. "The exponents of bacillar pathology depend solely upon hypothetical assumptions, ignoring all forms of evidence not adduced by themselves." "Their pathology is merely an experimental experience admitting of neither negations or offsets, their therapeutics, a form of still hunt with untried weapons, in an unknown jungle, after a hypothetical prey." "Indeed it is a sad travesty upon medical science, when authors and would-be teachers wantonly assert rabies, cholera, yellow-fever, dengue, tetanus, endocarditis, pneumonia, etc., are diseases whose microbic origin is positively known, when two of these are supported only by manifest fraud, in two more the evidence has never been adduced in any form, and in the other three it is of the most flimsy superficial character."

The treatment advocated is one of general stimulation and directed principally to the vagus; the utility of this being shown by reporting certain cases in detail. While the opinions set forth differ in many particulars from those of recent writers, yet they deserve careful reading at the hands of those who desire to learn.

Electro-Therapeutics of Neurasthenia. W. R. Robinson, M. D. The Physicians Leisure Library. G. S. Daivs, Publisher.

The author in this small volume considers the causes of neurasthenia, their classification and how they should be treated by means of electricity which he regards as the true nerve tonic. The dose, if it might so be called, is largely dependent on the susceptibility of the patient and the good judgment of the physician as well.

The author devotes special chapters to the three principal forms of electricity and their uses. He however, feels that there is often a necessity to combine with such treatment, other remedies; also he advises calling in the surgeon if local mischief exists, which is only amenable to the careful and conscientions use of the knife.

Treatment of Obesity by an Exclusively Nitrogenous Diet and Copious Libations of Water.

Savill and Haid (*Lancet of Pittsburg*) recommend the following treatment for pronounced obseity: The individual is restricted to a purely nitrogenous diet, consisting o one pound of cooked fish and one pound of lean meat per day, and a pint of hot water must be drunk at intervals of two hours. Aside from this, no other article of diet whatever must be taken. The meat and fish may be taken at regular intervals, as suits the case. Five or six pints of water should be taken during the day. The hypothesis on which this treatment rests is that the patient supplies the neeedful hydro-carbons, which are withheld from his diet, thorough absorption from his own body. The ingestion of the large quantities of hot water is likewise supposed to exert a beneficial influence in some unexplained manner. This should be continued even after the patient has returned to ordinary diet, from which, however, potatoes and especially beer are exculed. It is not unlikely that the large quantities of water tend to overcome the renal disturbances which often manifest themselves when an exclusive nitrogenous diet is adopted with the ingestion of the ordinary amount of water only.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE AMERICAN JOURNAL OF OBSTETRICS for December. Dr. Richard B. Maury contributes a paper on

The Present Status of our Knowledge of the Pathology of Pelvic Inflammation,

dealing especially with the treatment of pelvic abscess. The question as to whether cellulitus ever exists pure and simple, unassociated with pelvic peritonitis, he answers in the negative, and emphasizes the statement that suppuration of the cellular tissues of the pelvis is rare as compared with the other forms of pelvic abscess. As the result of his experience he comes to the following conclusions:

1. Pelvic cellulitus is an acute form of disease recognized clinically only in the puerperal woman, or in one who has suffered septic infection after a surgical operation on the genital canal.
2. Chronic cellulitus is a misnomer.
3. The occurrence of cellulitis to the extent of forming appreciable exudations in the pelvis is of infrequent occurrence.
4. Cellulitus to an appreciable degree, clinically, often occurs in connection with peritonitis. It is discoverable, on the cadaver, in the shape of small cicatrices, especially in the neighborhood of the tubes and ovaries, between the layers of the broad ligaments, and in the utero-sacral ligaments, and is associated with evidences of extensive peritoneal lesions.
5. When large exudations form in the cellular tissue the great majority undergo resolution. Suppuration is the exception.
6. Pus collections in the pelvic cellular tissue are seldom seen in comparison with other forms of pelvic abscesses.

He insists that all intra-peritoneal abscesses should be approached through the peritoneal cavity by abdominal section, with a view to enucleation and complete removal of the diseased structures which constitute the pus sac, and which if allowed to remain, are liable to cause a recurrence of pelvic disease. He should depreciate all endeavors to reach these abscesses by extra-peritoneal methods; believing, should the complete and thorough radical removal of the diseased tissue be impracticable or attended with too great risk, that drainage through an abdominal incision is safer and is attended with more complete relief than can be obtained by any vaginal operation.

Dr. Charles P. Noble discusses

The Relation of Certain Urinary Conditions to Gynecological Surgery.

He emphasizes especially the following points:

1. The importance of the systematic examination of the urine of gynecological patients, especially of those requiring celiotomy.
2. That the presence of albumin and of casts in the urine need not effect the issue of the operation.
3. That serious and prolonged celiotomies involving much handling of the abdominal viscera, in women having chronic Bright's disease (especially the small contracted kidney), usually terminate fatally.
4. That the prognosis is best when the presence of the albumin and casts in the urine is due to the pressure of an ovarian cyst which can be quickly removed.

The paper includes the report of six cases illustrating the points made by the author.

Dr. Francis Fœrster continues his article the

Comparative Microscopical Studies of the Ovary,

the paper in this issue being devoted to the consideration of the result of ovulation in the ovary. He condenses the results of his investigation as follows:

1. Whereas ovulation followed by pregnancy causes the production of a corpus luteum, which the author has shown to be an endothelia, ovulation without pregnancy will never cause the appearance of a corpus luteum or endothelioma.
2. In the cow, the sow, the ewe, and the guinea-pig the burst Graafian follicle, being first filled with blood, will in turn be filled with myxomatous tissue and be enclosed with a structureless layer, possibly the subepithelial follicular membrane.
3. Not infrequently the structureless layer, perhaps because of an infiltration with a elastic or hyaloid basis substance, is very broad, far in excess of the central myxomatous tissue.
4. Broad follicular membrances cannot be unchanged subepithelial layers, but must be due to a new formation of tissue from the medullary stage to a more or less perfect infiltration with hyaloid basis substance.
5. In the cat's ovary there are no follicular membranes, but, instead of these, broad layers of endothelia enclosing the central myxomatous tissue.
6. After a certain time the follicular membrane, or the layers similar to it, are, by a retrogressive change, transformed into an indifferent or medullary tissue. This change may take place in the whole follicolar membrane or in portions of it.
7. The central myxomatous tissue is likewise transformed to indifferent or medullary tissue.
8. From the medullary tissue, the outcome of both the follicular wall and the central myxomatous tissue, a new type is developed, known by the term of myxofibrous connective tissue.
9. The myxofibrous tissue in alternate portions falls back to the stage of protoplasmic indifference, and at last gives rise to a dense, delicate, cicatricial connective tissue.
10. The cicatricial fibrous connective tissue remains unchanged throughout life, and is the last remnant of a burst follicle. It may contain apparently structureless vestiges o

the follicular membrane or may be entirely destitute of the latter.

The paper is illustrated with wood cuts of sections of ovaries showing the various conditions spoken of by the author.

Dr. James F. W. Ross contributes a paper on

The Omentum and the Role it Plays in Operative Work upon the Abdomen.

The paper is largely taken up with a discussion of the functions of the omentum and the author is of the opinion that it in some way regulates the amount of fluid in the peritoneal cavity. He also likens it to a man-of-war, ready to sail to any port in which there is impending trouble, from the readiness with which it attaches itself to an inflamed tube or intestine for the purpose of shutting off any purulent collection from the general peritoneal cavity. The author also suggests that it may hold surplus supply of blood during the process of digestion, and that such blood, not being utilized as it is in other parts of the body, such as muscle and the liver and kidneys, deposit fat so frequently found in the omentum.

The various surgical diseases of the organ are also fully considered in the paper.

Dr. Charles Clifford Barrows discusses the

Conservative Surgery of the Uterine Appendage.

The author considers that the Trendelenberg posture has simplified all abdominal work enormously, as by its means we can bring the field of operation into view and by the proper placing of flat sponges or sterilized gauze pads shut off the general peritoneal cavity from any possible infection at the time of operation. Flooding of the cavity of the peritoneum and the use of the drainage tube he considers unnecessary. The author believes that certain cases of pyosalpinx may be successfully treated by amputation of the tube at some distance from the cornu of the uterus, and the formation of an artificial ostium abdominale. In cases of pyosalpinx where the ovary is healthy and the fimbriated end of the tube is not adherent to it, he has amputated the tube at the outer end of the healthy portion of the tube, washed it out, slit it up a short distance, and united its serous and mucous coats by fine catgut sutures thus forming an artificial ostium abdominale.

The author also publishes a table of cases operated on—eighteen cases with no deaths.

[The objection to the Trendelenberg posture in the minds of some operators is the ease with which pus could find its way into the upper part of the abdominal cavity whence it would be difficult to remove it. It is a very significant fact that the most successful operators are in the habit of using the drainage tube and flushing the abdominal cavity in cases where the procedure is warranted by reason of hemorrhage or purulent collections within the pelvis.—Ed.]

Dr. Henry Louis Hayes reports " A Case of Protracted Gestation—Delivery on the Three Hundred and Eighty-ninth Day." The author is of the opinion that these ten grain doses of Quinine were very instrumental in inducing the labor.

Dr. George Wythe Cook discusses the question "Should Marriage be Recommended as a Remedy for Disease in Women?" After reporting a number of cases the author comes to the conclusion that marriage has a tendency to increase the pain of dysmenorrhœa by direct irritation causing excessive hyperæmia, and to aggravate nervous conditions by reflex over stimulation of the nervous system.

The remaining papers in this issue are: "Cavernous Angioma of the Uterus," by Dr. H. J. Bolt; " Report of a Case of Ovarian Tumor Complicated by Encysted Remains of Tubal Gestation on One Side and Calcified Ovary on the Other," by Dr. Marcus Rosenwasser; " A Case of Diffuse Sarcoma of the Mucous Membrane of the Uterus," by Dr. Warren Coleman; and " Poliomyelitis Anterior Acuta Infantilis: Its Ftiology and Treatment," by Dr. Anna M. Galbraith.

THE VIRGINIA MEDICAL MONTHLY

for December. Dr. Charles H. Bushong contributes and article on

Abortion in its Earliest Weeks—its Treatment.

The author believes that many abortions, particularly where the pregnancy is of only a few weeks, are overlooked and the cessation of the periods attributed to cold or other indiscretions. The possibility of pregnancy should never be overlooked in any case where the patient has missed a week or more over her usual period and then looses an unusual amount of blood. In view of the possible sequences of abortion, its immediate and proper treatment is of the utmost importance. If seen early enough, the first thing to do is to attempt to prevent the abortion and check the tendency to expel the fœtus. This should always be done when possible. When the condition is such that all hope of saving the fœtus has passed, or when the symptoms are dangerous to the mother, everything must be done to expedite its expulsion. For the purpose of preventing the abortion the author advises the use of powdered opium, in pill form, in doses of half a grain to two grains, continued for two or three days in diminishing doses. Where there is considerable hemorrhage and yet reason to believe that the fœtus is living, he advises the use of ergot either with or without hydrastis. He believes the best result will be obtained by the administration of half a minim of the fluid extract of each drug every ten or fifteen minutes for the first few hours. He states that, given in this way, a smaller amount of the drug will be required and there is less liability of the stomach becoming upset. Quinine has, however, been more satisfactory to him than either ergot or hydrastis. It is given in one grain doses of the sulphate every hour until cinchonism is produced or the hemorrhage controlled. Each dose is followed by an ounce or more of water. Absolute rest is enforced and too frequent examinations of the uterus through the vagina avoided.

If it is decided that the abortion is inevitable the uterus must be emptied of its contents. He rejects the use of the tampon on account of its uncertainty and the danger of pyæmia as the result of retention of some of the fœtal envelopes or the damming back of the blood into the tubes. The patient should be etherized, the cervix dilated if not already sufficiently open, and the contents of the uterus removed by some one of the various forceps made for the purpose. The uterus is then cleansed by means of small pieces of cotton dipped in hot water. Following this, the uterus is swabbed out with carbolic acid diluted one-half with glycerine, and the vagina cleansed thoroughly with cotton dipped in hot water. The patient should remain in bed with light diet for some days. The author finds quinine in five grain doses three times a day useful in puerperal cases. It has replaced ergot entirely in his obstetric practice.

If there is any tendency to pelvic peritonitis, hot vaginal douches must be given. Should the cervix close, an Outerbridge drain is to be introduced. If pelvic peritonitis sets in, it can be allayed by the use of a saturated solution of Epsom salts. Care should be taken to prevent the patient from moving about too soon.

Dr. Russell M. Cunningham presents

Some Recent Observations of Croupous Pneumonia,

with special reference to prophylaxis and treatment. The paper contains the results of the observation of ninety-three cases in one of the convict mines in Alabama. The author presents the following as his views in regard to the disease:

1st. It is a constitutional disease, with a local anatomical sign, consisting of an inflammation of the pulmonary parenchyma, and caused by its own specific materies morbi or germ, probably that of Frankel or Friedlander.

2nd. That the special circumstances under which this germ is evolved and operates are unknown, as we have it under diametrically opposite conditions, both good and bad.

3rd. That the disease, as a rule, prevails endemically, rather epidemically, and still more rarely sporadically.

4. That these endemics differ in type and in extent of pulmonary inflammation, and, consequently, in mortality.

5th. That the disease is severer in public institutions, especially prisons.

6th. That the negro is especially predisposed to the disease, has less capacity to resist it, and, consequently; a larger mortality.

7. That coal-miners, especially negroes, while not predisposed to the disease, are favorable subjects for extensive pulmonary inflammation, and have less capacity to resist the disease, owing to the more or less anthracosis of the pulmonary tissue.

8th. That the mortality is mainly determined by the type of the disease; first, in the primary effect of the germ upon the nervous system; and secondly, the extent of pulmonary inflammation and in the rapidity of its invasion and development.

9th. That the mild, uncomplicated cases, with a fairly good pulse and moderate temperature, and with only one lobe, especially a lower lobe, involved, intrinsically tend to recovery; and that the severe cases, complicated or not, with fast and weak pulse, fast or labored respiration, regardless of temperature and attended by great prostration, intrinsically tend towards death, and without judicious treatment will die, regardless of the extent of pulmonary inflammation; and that in the cases in which the pneumonia is double, particularly if the double invasion is simultaneous, their tending is to a fatal issue; and finally, that in the cases in which the inflammation is universal by a simultaneous or rapidly successive invasion of the entire long structure, death is the inevitable rapid result. Therefore, in comparing statistics, all these things should be taken into account, otherwise they are worthless. Hence the wide divergence in the statistics and difference in treatment of various observers.

10th. That the immediate cause of death in many cases is ante-mortem heart clots.

11th. That the main features of treatment are: (a) to combat the shock of the germ invasion, best done by opium, stimulants, and, in my opinion, hypodermoclysis; (b) to stimulate freely, the best stimulant, as a matter of routine, being whiskey and strychnine, supplemented in extreme cases by tincture strophanthus; (c) to control temperature, the best method being the bath; (d) to prevent, if possible, heart clots, hypodermoclysis, in my opinion, being the most reliable; (e) to meet indications as they arise.

Dr. Charles G. Cannaday discusses "Chronic Endometritis, its Aetiology, Modern Methods in Diagnosis and Treatment," advocating the use of electricity for the cure of the condition.

The remaining papers in this issue are: "Insanity—Its Relation to the Public and Profession," by Dr. R. J. Preston; "The Law of Virginia as to Right of Physicians to Recover their Fees by Suit," by Samuel D. Davies; "Forensic Medicine," by Dr. C. G. Comegys; "The Human Brain—An Appeal to the General Practitioner to give it More Study," by Dr. J. Harrison Hodges; and "Periodical Inebriety," by Dr. T. D. Crothers.

Under Clinical Reports, Dr. Charles P. McMabb presents "A Case of Brain Injury —Compression—With Slight Symptoms at First—Trephining, Recovery;" and Dr. R. H. Garthright reports a "Case of Maternal Impressions."

Syphilis—Children.

The joint affections occurring in children suffering from inherited syphilis may be any of those caused by the acquired disease, which Hutchinson enumerates as follows:

"1. Synovitis during secondary stage.

"2. Perisynovial gummata.

"3. Arthritis due to osseous nodes or gummata in the neighborhood of the joint.

"4. True chronic synovitis.

"5. Syphilitic chrondro-arthritis (of Virchow.")—*British Med. Jour.*

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

MEDICINE

Nayet on Effects of Inoculation in Animals of Human Cancer and Cancerous Products.

1. Carcinomatous tissue from man macerated in glycerine gives a liquid which injected several times into the bodies of white mice is able to develop a neoplasm evidently cancerous.

2. This result is obtained only after a very long period of incubation and is accompanied by a cachexia which develops suddenly only a little while before death. In one case eleven months intervened between the cachexia and the last inoculation.

3. When the production of the neoplasm does not result, the animal succumbs to a tardy cachexia without any anatomical alteration appreciable to the naked eye.

4. This fatal cachexia also results (though a little more slowly) by one injection sufficiently large, of the glycerine extract (prepared from an epithelioma of the stomach) without macroscopical change.

5. The grafts of human cancerous tissue in the white mouse are absorbed without producing any local or general alteration, at least during the six months which the animal generally survives.

6. Where two distinct cancers have been obtained in the same animal, one must admit that they result from the first injections of the cancerous liquid, for it is irrational to suppose that two cancers shown to be contemporaneous by their equal development can produce themselves spontaneously and simultaneously.

Multiple tumors always grow by dissemination of degenerated elements proceeding from the older and more developed neoplastic focus.—*La France Medicale.*

Prevention of Tuberculosis.

Lawrence F. Flick (*Medical News*) offers a comprehensive scheme of practical measures for the prevention of tuberculosis. 1. Registration of all cases of the disease which have arrived at the breaking down or infectious stage.

2. The education of the public at large and of the people immediately concerned as to the contagious nature of the disease and how to avoid contracting it and how to avoid transmitting it to others.

3. The careful and thorough disinfection of all infected houses, penal and reformatory institution, conveyances and public places.

4. The establishment of special hospitals for the treatment of the poor suffering from the disease.

5. Government inspection and regulation of dairies and slaughter-houses.

6. The enactment of laws and ordinances forbidding practices as a result of which others are liable to be infected.

7. The restriction and regulation of interstate and international emigration of persons suffering from the disease.

8.The retirement of all tuberculous patients in the infectious stage from occupations in which they can infect others and the pensioning of those who cannot be maintained in hospitals.

Foot and Mouth Disease in Man.

A fatal case of glossitis is recorded by Dr. Rose of Berlin. It occured in a man of 50, who was admitted to the hospital with great œdema of the tongue and albuminuria. Notwithstanding diminution in size of the tongue, death occurred on the fourth day. *Post-mortem* examination revealed no œdema of the glottis nor infarct in the lung. There was venous stasis in the meninges. The liver was icteric and fatty. Cocci were cultivated from the kidney similar to those found by Siegel in foot-and-mouth disease. Dr. Siegel said that the case plainly belonged to the category of diseases of the tongue such as he, the speaker, had repeatedly observed during the last few years, In human foot-and-mouth disease the tongue was always swollen, but he had only observed six cases similar to the one described. Two cases like the one mentioned died with symptoms of general septicæmia; three recovered without any special consequences; one man was the subject of very remarkable changes. Of the tongue only a stump remained, movable with difficulty; the remainder had necrosed and fallen off. In 1891 he had first published a work on cases of human root-and-mouth disease reminding one of scurvy. There were blisters on the tongue, and mucous membrane of the cheeks, lips and nose. The patient couplained of attacks of giddiness, and pain in the stomach and liver. The general appearances were those of a typhoid disease, with low atypical fever of very prolonged duration and high mortality. In a series of necropsies he had always found the same bacterium in all the organs, but especially in the kidneys and liver. Inoculation of animals remained for a long time without any result; but when pigs and calves were inoculated, vesicles appeared on the mouth, declared by experts to be foot-and-mouth disease. The same organisms were found in the organs of these animals. When the disease was conveyed to man, the symptoms would vary greatly with the degree of virulence. He observed an epidemic of the disease in 1892, affecting children and adults in equal proportions. Out of 192 severe cases, 16 died, equal to 8.5 per cent. In May and June of the present year there was a slight outbreak of the disease. In four necropsies the same bacteria was found as in other cases. A peculiar localization of the vesicles was that on the breasts of suckling women and the prepuces of men and boys. The disease might therefore be mistaken for syphilis. In one case the vesicles formed on the conjunctiva and cornea, with very unfavorable prognosis. The vesicles on the soft palate and tonsils might easily be mistaken for diphtheria. In many cases an exanthem like that of measles or scarlatina was spread over the whole body; in these instances the low temperature was an indication of the nature of the disease. As regarded treatment, salicylate of sodium showed a distinctly specific activity, and the litho-salicylate of sodium produced the same beneficial effects.—*The Med. Press and Circular.*

Actinomycosis Cured by Potassium Iodide.

Dr. Meunier, communicated to the *Paris Academy of Medicine*, the history of a case of actinomycosis in man, the seventh on record in France; but the first treated and cured by the iodide of potash. The patient was a railroad engineer who had never lived in the country, and given the frequency of animal actinomycosis in Touraine, the disease must have been of alimentary origin. A cervical phlegmon first appeared, of greater consistency and hardness than are found in the ordinary phlegmons, and to which he proposes to apply the name of cervical actinomycotic pseudo phlegmon.

The results of the treatment by the iodide were so satisfactory that the author is tempted, after Thomassen, to consider potassium iodide as a specific in the treatment of the disease.

The Use of Cocaine in Small-Pox.

Dr. Samayoa, (*La Escuela de Medicina of Guatemala*; *Pacific Med*) after using this alkaloid in several cases of small-pox, states his results as follows.

1. Cocaine given continuously from the beginning can completely abort the disease.
2. If given after the eruption has appeard, it will transform confluent or hemorrhagic forms into the discrete.
3. Sometimes when the cocaine is given from the beginning of the disease, the eruption assumes a *corneal aspect*, and the pustules collapse before the usual time.
4. Cocaine prevents suppuration, hence there is no secondary fever, and no pitting.
5. To obtain these results it is necessary to give cocaine as soon as the initial symptoms appear, *and must be continued, without interruption.*
6. The best preparation is the hydrochlorate, and should be continued five or six days or even nine if necessary.

Heart Failure.

In an article by Dr. J. W. Maddin, Nashville *Jour. of Med. and Surg.* the following conclusions are arrived at:

" Whatever produces unhealthy structures of nerve fibre, nerve cells, or nerve ganglia, or the tissue to which they are distributed and upon which they act, preventing normal impulses, which regulate automatic and reflex movement, such causes as reside in errors of healthy sanguification producing degeneration of tissue, especially heart tissue, or tissue of blood vessels which nourish the heart, are potent factors of heart failure.

Whatever stimuli, mechanical tumors, abnormal elements of the blood, chemical poisons, or other causes which produce pressure or undue irritation upon nerve tracts, nerve cells or ganglia of the heart, impairing healthy metabolism and normal impulse, are causes of heart failure.

High temperature of the atmosphere, combined with conditions predisposing to sunstroke from without the body, or high temperature of the body from fevers, producing *heat stroke* from within, paralyzing sympathetic and vaso-motor power, determining blood flow to the cavities of the body, and giving full play to the inhibiting power of the vagus, will slow, still and stop the heart action.

Finally, whatever of the natare of shock, whether from a blow without the body, or equally, through a subtle blow to the emotional nerve centers of the brain, whether through grief or fear, or anger, or other emotion which produces molecular change in the axilla cylinder of nerves leading from end organs of the body or from emotional brain centers through the medulla oblongata where these fibres cerebral, vaso-motor, sympathetic, and inhibitory—commingle will by parlaysis produce that most sudden, irremediable and quickly fatal of all heart failures."

A Case of Diffuse of Gangrene of the Left Lung.

The patient was a school boy aged ten years, and the accident occuring during the operation of excision of the left knee-joint, and the removal of a sequestrum from the femur The pulmonary symptoms appeared two days after the operation, and died sixteen days after the operation.

The post-mortem examination showed the presence of a diffuse gangrene of the left lung due to the presence of a temporary molar tooth, which was supposed to have got into the bronchus when the patient was under the chloro form at the time of the operation on the knee-joint and femur.

Treatment of Asthma.

Prof. Dieulafoy (*Gaceta Med. Catalana*) treats asthma as follows:

1. If the attack is just coming on, he applies the following to the interior of the nasal cavity:

℞	Cocain. Muriat.	15 grains.
	Aquae Destillat.	5 drachms.

Or this solution may be applied to the nasal cavity or throat by means of a spray, a teaspoonful being thrown in in four or five minutes. If this does not suffice, six to twelve drops of pyridin may be inhaled from a handkerchief, or one fluid drachm may be poured upon a cloth and kept near the patient's chair. Stramonium leaves and nitrated paper may be stuffed into a large pipe in alternate layers and smoked, if the attack is well under way. If the attack is at its height, then one may inject half a hypodermic syringeful of—

℞	Morphin Mur	1½ grains.
	Aquae Distallat	2½ drachms.

This usually has a sedative influence. Repeat in a quarter of an hour, if necessary.

2. In the intervals administer the iodide of potash, twenty-two to thirty grains daily, commencing with four grains a day, and increasing the dose to fifteen, twenty-two, or even thirty grains if the asthma be of long duration.

3. If the disease be of diasthetic origin give during fifteen days fifteen to thirty grains of the iodide of potash, to follow with fifteen days belladonna:

℞	Pulv. Folior. Belladonnae	3 grains.
	Extract Belladonnae	3 grains.

Sufficient for twenty pills. Commence with one-half a pill, increasing to one pill a day.

At the same time prescribe:

℞	Sodii Arseniat	1 grain.
	Aquae Destillat	2½ ounces.

This treatment should be continued three to six months.

4. If there be emphysema, inhalations of compressed air.

Residence in mountainous and elevated countries should be avoided. Strong odors are among the exciting causes.

ARMY AND NAVY.

U. S. ARMY, FROM DECEMBER 10, 1893, TO DECEMBER 19, 1893.

First Lieutenant John S. Kulp Assistant Surgeon, now on temporary duty at Jackson Park, Chicago, Illinois, is relieved from further duty at Columbus Barracks, Ohio, and when his services, are no longer needed with the troops at Jackson Park, will report in person to the Commanding Officer Fort Sheridan, Illinois, for duty at that post.

First Lieutenant Madison M. Brewer, Assistant Surgeon, having relinguished the unexpired portion of his sick leave of absence will report in person to the Commanding Officer, Fort Monroe, Virginia, for temporary duty at that post.

Leave of absence for four months, to take effect about January 6, 1894, with permission to go beyond Sea is granted Major Alfred C. Girard, Surgeon U. S. Army.

NEWS AND MISCELLANY.

International Medical Congress.

The undersigned Chairman of the American National Committee of the Eleventh International Medical Congress has received the following communications from the Secretary General:

First. Papers to be read in any of the Sections of the Congress should be announced on or before January 31st, 1894, to the Secretary General, Prof. E. Maragliano, Ospedale Pammatone, Genova, Italy.

Second. The title of the paper ought to be accompanied with a brief abstract of its contents and conslusions.

Third. The programme to be distributed will contain the titles of all the papers announced before August 31st, 1893, and since.

Fourth. The reductions granted by the Railway Companies months ago will be available from March 1st to April 30th, 1894.

In the interest of such medical men as will sail for Europe before official cards will have been received from the General Committee, the undersigned proposes to supply in as official a form as he thinks he is justified in doing, credentials which are expected to be of some practical value. It is suggested, besides, that a passport may increase the traveler's facilities.

Very respectfully,
A. JACOBI, M. D.
110 W. 34th Street, New York,
Dec. 10th, 1803.

Reduced Rates for the Holidays.

In pursuance of its liberal policy, the Baltimore and Ohio Railroad Company announces that excursion tickets will be sold between all stations on its lines east of the Ohio River during the Christmas and New Year holidays at reduced rates. The tickets will be sold for all trains December 23, 24, 25, 30, 31 and January 1, and will be valid for the return journey on all trains until January 3 inclusive.

Through Cars to New Orleans.

Among the many important improvements in the Baltimore and Ohio Railroad train service is the addition of through pullman Sleeping Cars from New York to New Orleans, via Philadelphia, Baltimore, Washington, and the famous Shenandoah Valley route, passing through Roanoke, Knoxville, Chattanooga and Birmingham. The train leaves New York daily at 5.00 P. M.; Philadelphia, 12th and Market Sts., 7.22 P. M and 24th and Chestnut Sts. 7.38 P. M., reaching Roanoke at 7.50 A. M.; Knoxville, 3.52 P. M., and New Orleans, 12.45 P. M.

This train is very handsomely appointed, being vestibuted throughout, and has Dining Car service New York to Chattanooga. At Washington a Pullman Sleeping Car, which runs through to Memphis, is added to the train.

THE

MEDICAL AND SURGICAL

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ORIGINAL ARTICLES.

A CONTRIBUTION TO THE STUDY OF THE MYELIN DEGENERATION OF THE PULMONARY ALVEOLAR EPITHELIUM.*

VERANUS A. MOORE, M. D., WASHINGTON, D. C.

In 1854 Virchow (1) described as myelin drops a substance which he found in several tissues of the human body. Nearly twenty years later Buhl described a similar substance in the pulmonary alveolar cells and attached much importance to its presence. A few other investigators have referred to the alveolar cells containing this substance in the sputum of both healthy and diseased individuals; but the conclusions which have been reached are so widely separated that further investigations are necessary to complete our knowledge of this interesting metamorphosis. The only fact which seems to be fully established concerning it, is that under certain conditions, which have not been clearly defined, these cells undergo a very peculiar change which was designated by Buhl as *myelin degeneration* on account of the resemblance of the resultant substance to the drops of myelin which escape from the cut ends of nerve fibers. The fact has not heretofore been clearly determined whether these cells are subject to this change while they are still attached to the alveolar wall, or whether it is a process peculiar to their dissolution, induced after they are separated from their source of nutrition. The simple fact has been observed that in the alveolar cells that are found in the sputum, this degeneration is sometimes present. Its importance is somewhat speculative although several opinions have been expressed concerning its significance.

Buhl (2) considered the myelin degeneration of the alveolar cells to be of special value in the diagnosis of desquamative pneumonia and in differentiating it from fibrous pneumonia which it resembles in many particulars. Bizzozero (6), and Guttmann and Smidt (5) found alveolar cells undergoing this change in the sputum of healthy individuals, especially in those who had passed the age of thirty. Senator (7) has reported finding these orops in the cells from the deep layers of the bronchial epithelium. Hoffmann (8) and Lenhartz (9) considered them of diagnostic importance in valvular trouble of the heart on account of the blood pigment which they frequently contain. Sommerbrodt (3), and Kronig (10) agree essentially with Hoffmann in his views of their diagnostic importance.

DEGENERATING ALVEOLAR CELLS AND THEIR PRODUCTS IN THE SPUTUM.

In the fall of 1891 I had occasion to examine several specimens of sputum from a married lady, aged about 30 years, who was suffering from pulmonary tuberculosis. In the examination of the sputum in the fresh[1] condition my attention was directed in addition to the elements usually found in tubercular sputum to a considerable number of large, squamous cells varying in size from two to four times that of leucocytes. They were finely or more coarsely granular and in some instances they contained within the cellular substance several quite large, round or pear-shaped bodies. There were also a large number of free bodies in the sputum varying in size from mere points to 20 micro-millimeters in diameter. They were round, pear-shaped, pointed and irregular in form, and of a homogeneous, neutral gray or pearly appearance. Afew of the larger forms exhibited a stratified condition. Usually they presented a double contour and resembled somewhat closely the myelin drops found in teased preparations of nerve tissue. Up to that time I had considered these sells and free bodies which has occasionally been observed as cells undergoing fatty degeneration and fat globules. In these examinations I became convinced that these bodies were not the product of fatty changes and their interpretation occasioned no little study. Finally the cells were identified with the alveolar cells described by Buhl and the free bodies were found to be the production of the myelin degeneration of the alveolar cells. The specimens of sputum that were subsequently examined contained an innumerable number of these forms. Tubercle bacilli were present in large numbers. The patient was sent to the mountains where she improved but nearly two years later, Spring of 1893, the sputum contained these bodies in large numbers.

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* Read before the American Microscopical Society, Madison, Wis, August, 1893.

[1] Attention should be called to the importance of examining sputum in a fresh condition. There are, to be sure, specific methods by which particular objects are demonstrated, as for example, tubercle bacilli, but in the examination for the bacilli only, many other structures may be destroyed, and consequently entirely escape the attention of the observer. The value of examining, microscopically, tissues in a fresh condition, seems to be overlooked by a large number of microscopists, who rely upon the examination of stained preparations only.

Further examination of the alevolar cells in tubercular sputum showed them to be present in four forms: (1) cells varying from 10 to 15 micro-millimeters in diameter, with the cellular protoplasm finely granular and the nuclei distinct; (2) cells similar to (1) but containing more or less pigment; (3) cells slightly larger than (1) and filled with small bright bodies with or without pigment, nuclei not distinct; and (4) cells very much larger, 30 to 40 micro-millimeters in diameter, and filled with small and much larger bodies of a high refractive index, and the nuclei entirely obliterated. The forms described under (1) and (2) were differentiated from other epithelial cells by their size and form and those designated under (3) and (4) by their size and the character of the bodies which they contained. Bizzozero speaks of fatty alveolar cells but in my investigations the bright bodies within these cells have not reacted to the reagents for fat globules although they resemble them very closely in their microscopic appearance. Where the myelin degeneratian is more advanced the cells were frequently broken down and the myelin bodies were observed escaping from the cells. The pigment is either of an extraneous nature, such as fine particles of coal, iron dust, or other pigmentary substances that were inhaled during respiration or to the pigment from the blood. I have observed the pigmented cells a few times only and in all of these cases it was evidently of an extraneous character.

The free bodies in the sputum are exceedingly interesting from the great variety of forms and sizes which they display. Frequently they give the appearance of a band of grayish, homogeneous substance wound and twisted into a variety of forms. The round forms appear with a uniform, rather thick, periphery and a central marking, which at times resembles a perforation. In the pear-shaped and pointed forms there is almost invariably a central longitudinal marking. In some of the larger homogeneous bodies the beginning of a laminated condition was observed. In other cells it was more advanced, and in still others the lamination was nearly complete. In watching these bodies for a little time they were observed to change their form. In the larger homogeneous bodies the change resembled somewhat closely the amœboid movement, but it was undoubtedly due to a passive motion produced in the flexible, elastic bodies by the action of currents in the preparation, or by the pressure of the cover-glass. In the stratified forms there were frequently observed quite jerky or springy movements of the laminæ. The lamination and subsequent breaking up of the laminæ appear to be the last stages in the degeneration of the cells. The source of the large forms is explained on the supposition that in the metamorphosis of the cells the small bodies usually observed coalesce, forming one or more large masses. A few cells have been observed which contained these large bodies.

THE REACTION OF THE DEGENERATING ALVEOLAR CELLS TO MICRO CHEMICAL RE-AGENTS.

The myelin bodies either free or within the epithelial cells do not react readily to the ordinary micro-chemical re-agents.

In a preparation of sputum (prepared by placing a drop on a slide and covering it with a cover-glass), the large alveolar cells and free bodies can be readily observed, by the aid of a 4mm. objective. If to the preparation a few drops of a ten per cent. solution of potassium hydrate is added (allowed to pass under the cover-glass) the mucous substance is dissolved and the free myelin-drop-like bodies stand out very clearly. The larger alveolar cells are disintegrated and the contained bodies set free. This is the most valuable reagent which I have found in studying these forms. The myelin bodies are rapidly destroyed by alcohol, less quickly with weak acids. They do not take any of the stains ordinarily used in histological or bacteriological work. Osmic acid produces a very faint brownish color, Kaatzer (11) found osmic acid to produce a deep black color. In sputum that has stood for some time (several weeks in a cool place) iodine in iodide of potash (iodine 1 gram, iodide of potash 2 grams, distilled water 300cc.) imparts a faint lemon color in the homogeneous forms. This color is not changed by the addition of sulphuric acid. They are affected slowly by ether. The fact that they are destroyed by alcohol renders their demonstration in mounted lung tissue practically impossible. In sputum hardened* in picric-acid-alcohol imbedded in paraffin, and sectioned. I have been able to detect these bodies in a much shrunken condition, but they are not satisfactorily demonstrated in this way. Their identity with myelin is n ot yet postively established, but, so far as I have been able to determine, they resemble it more closely than any of the other substances that have been found in the animal body. Until the chemical nature of this substance is more accurately determined it seems best to adopt the term used by Buhl and others. Future investigations, however, may demonstrate that it is not so closely related to myelin as we may think it is, and consequently the term "myelin degeneration," may have only a temporary existence.

The very large number of degenerating alveolar cells in the specimens of tubercular sputum from the individual mentioned, led to a somewhat careful search for these cells in other specimens which I have had occasion to examine. They have appeared in over ninety per cent. of these specimens. In several instances they could not be found in the first specimens received, but in subsequent ones they were present. Occasionally they could be found in only one or two preparations from a large number made from the same specimen of sputum. I have also found them in large numbers in several specimens of sputum in which no tubercle bacilli could be found, but in which there was much pus and many spheroidal (basement) epithelial cells from the bronchi. I have also found them in the sputum of people suffering from a slight cough (bronchitis), and in a few specimens from people twenty-five years of age and older, who were believed to be perfectly healthy.

Through the kindness of Dr. Wellington (at that time resident physician at the Children's Hospital, Washington, D. C.) I obtained lung tissue from a few fatal cases of tuberculosis. A most interesting case was one of general tuberculosis in a girl about six years of age. There were comparatively few tubercles in the lungs. They were small, and in the piece which I received they were separated from each other by a distance of from 2–5 cm. The intervening tissue was apparently normal. The alveolar epithelium from near the tubercles and from the intervening normal tissue was very carefully examined. In alveolar cells,from near the tubercles,there were a large number of myelin bodies,varying in diameter from 0.2 to 4.0 micro.millimeters. When treated with potash the cells were disintegrated and the enclosed bodies set free. They could not be distinguished from those found in sputum. In the tissue most remote from the tubercles the alveolar cells rarely contained the myelin bodies, although they were occasionally observed. This is interesting, as in the tissue immediately adjoining the tubercle almost every cell was undergoing this degeneration. All of the cells were not detached from the alveolar wall. Like the sputum, these bodies could not be detected in sections of the lung hardened in alcohol.

MYELIN DEGENERATION OF ALVEOLAR EPITHELIUM IN ANIMALS.

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*In an article on the technique and value of sputum-examination (*Medical News*, May 14, 1892) I called attention to the value, and described the technique, of sectioning sputum for the study of the relation of the tubercle bacilli to the yellowish more dense particles in the sputum. Although this method can not be recommended for the demonstration of tubercle bacilli it is possessed of certain advantages for the histological study of sputum.

The appearance of these bodies in the alveolar cells of the human lung led to the examination of the lungs of different animals. In pigs, rabbits, guinea pigs, and mice, that perished from swine plague, hog cholera, or other virulent bacteria, the myelin degeneration of the alveolar cells was demonstrated by the aid of a ten per cent. potash solution in all of the cases examined. The technique necessary to bring out these myelin drops was very simple. Sometimes they could be seen very clearly when a bit of the lung tissue was teased in normal salt solution. Usually, however, it was necessary to add to the preparation a few drops of the solution of potassium hydrate, which would dissolve the cellular substance and leave the minute and larger myelin bodies free. These were usually pointed or pear-shaped and exhibited the longitudinal marking. They differed in no appreciable manner from those found in the human lung or sputum. In healthy animals that were killed by bleeding or with chloroform, very few of the alveolar cells were found to contain these drops. Frequently they could not be found at all. In lungs that were not examined for from two to three days after the death of the animal, the myelin degeneration of the alveolar cells was more common. In lungs of cattle affected with pleuro-pneumonia, Dr. Theobald Smith found the alveolar cells to contain bodies which presumably were the same as those which I have found in other animals. They differed, however, in being more uniform in size. In 1890 I observed similar forms in the alveolar cells of a cow's lung which contained actinomycosis and a small amount of accompanying pneumonia, but at that time their nature was not determined.

From my observations, the myelin degeneration of the alveolar epithelial cells may be looked for, (1) in the sputum of people suffering from pulmonary tuberculosis and certain other more or less serious lung disturbances; (2) in the lungs of certain species of animals (and probably in all vertebrates) that have suffered from a disease in which there was more or less fever before death, either with or without a localization of the disease in the lungs (the more the lungs are affected the more numerous are the myelin drops); and (3) in the sputum of people of twenty-five years of age or older, and in the lungs of healthy animals; in these, however, the myelin degeneration is more rarely found, and the number of cells undergoing this change are very few compared with the number in the diseased lung. This would indicate that the myelin degeneration is the course through which the pulmonary alveolar cells naturally pass in their final disintegration, and that this process is hastened by the influence of certain diseases. Virchow (1) found myelin drops in the various organs of the body, and Panizza (4) found them to be a product of the mucous membrane of the mouth of frogs; with these exceptions they appear to have been observed only in the pulmonary alveolar epithelial cells. Panizza considered the myelin drops to be a product of mucin. The appearance of this metamorphosis in the alveolar cells of such a large number of animals indicates its universality and points out another interesting condition which may be studied in the lower animals, and about which much may be learned without waiting for the accumulation of facts from the human species. Although I have examined the lungs of a large number of animals under the conditions previously stated, other work has prevented a more exhaustive study of the conditions under which this metamorphosis occurs.

My opportunities have not been such that I could accumulate data upon the practical or diagnostic value of these peculiar cells in the human sputum. It is hoped that those who have clinical advantages will make good use of their material and microscopes, so that in the near future the diagnostic value or non-significance of these forms may be clearly established. It is probable, however, that they will be found in a large variety of inflammatory affections of the lungs, but is no impossible that they may be, to a limitedt extent, of diagnostic value, especially in young individuals:

List of authors referred to in the text.

1. VIRCHOW. Virchow's Archiv, 1854, Bd. VI. p.562.
2. BUHL. Lungenentzundung, Tuberkulose u. Schwindsucht. 1872.
3. SOMMERORODT. Virchow's Archiv, 1882. Bd. LV, p. 165.
4. PANIZZA. Deutches Archiv f. klin. Med. 1881. Bd. XXVIII, p. 343.
5. GUTTMAN UND SMIDT. Zeitschrift f. klin. Med. 1881, Bd. III, p. 124.
6. BIZZERO. Centralblat f. klin Med. 1881, p. 529.
7. SENATOR, Berliner klin. Wochenschrft., 1881. p.360.
8. HOFFMAN, F. A. Archiv f. klin, Med. 1889, Bd. XLVI, p. 252.
9. LENHARTZ. Deutche Med. Wochenschrift, 1889, Bd. XV, p. 1039.
10. KRONIG. Charite Annales 1890, tome XV. p.227
11. KAATZER. Das Sputum und die Tichnik seiner Untersuchung, 1891, p. 18.

COMMUNICATIONS.

DIPHTHERIA AND SCARLET FEVER AT THE BOSTON CITY HOSPITAL[*]

A. L. MASON, M. D.

The history of scarlet fever repeats itself in the periodic outbreaks such as the one we are now going through, in which not only the number of cases throughout the city shows a manifold increase over average years, but the disease also assumes a more virulent type, as shown by a higher death-rate in the Board of Health reports. Thus during the past twelve years the minimum number of cases throughout the city shows a manifold increase over average years, but the disease also assumes a more virulent type as shown by a higher death-rate in the Board of Health reports. Thus during the past twelve years the minimum number of cases reported was 383 in 1881, the maximum 2,938 in 1892, the death-rate varying from 4.5 to 16.6 per cent. in different years, the highest and lowest rates, however, not corresponding very closely with the years of greatest and least prevalence.

With diphtheria the history has been a different one. The first recorded deaths from this disease occured in Boston only thirty-three years ago. Physicans were then unfamiliar with it. If it prevailed under other names in earlier days it had become sporadic or had disappeared again. In 1859 there were but 19 deaths from this cause in Boston. The number gradually increased to 72 deaths in 1874, and in 1875 suddenly rose to 420. From this time it may be said to have become endemic, although the increase in mortality from this source has by no means corresponded with the growth of the city or the unfavorable elements of the recent immigration. Indeed, there were but 401 deaths from diphtheria in Boston in 1890, and in 1891 only 232, the number rising again to 414 in 1892. Unlike scarlet fever, however, the ratio of deaths to reported cases is always a high one, about 30 per cent.; in some years more than one-third, never less than one-fourth, resulting fatally.

About one-sixth of all reported cases of diphtheria and scarlet fever in Boston are admitted to the City Hospital, the only institution where they can be received. The result, in scarlet fever, shows no great variation from that which obtains in the city at large,— a mortality of 5 or 6 per cent. in certain years, and an increase to double that rate when grave complications prevail.

In recent years, especially during the epidemic of 1892 93, a very formidable class of cases has appeared in increasing numbers; namely, those in which scarlet fever is accompanied by diphtheria. In 1890 there were 4 such cases at the Hospital; in 1891, 24; and, in 1892, 90 out of a total of 332. Of these 118 anginose cases, 51 died. They were all admitted to the scarlet fever ward, as presenting primarily the appearance of that disease.

In a previous report,[†] relating to the period from 1880 to 1888, the present writer stated that "a frequent complication was a condition which could not be distinguished clinically from diphtheria. Either at entrance or in the early days the tonsils and fauces were covered with a dirty, gray, diphtheritic membrane often foul in odor, accompanied by a nasal discharge and glandular swelling. There were 40 such cases (out of 450). 7 were transferred to the surgical department for tracheotomy, and 5 others died. The rash in these cases had the typical appearance of scarlet fever. Post-diphtheritic' paralysis developed in several instances.'

Since that time there has been much discussion as to the exact status of these mixed cases; and many observers have decided, from bacteriological studies of certain collections of cases, that the faucial inflammation was not true diphtheria, but a pseudo-membranous exudation, characterized by the presence of streptococci, and other organisms, seldom, however, by the Klebs-Loeffler bacillus of diphtheria.

But the results of bacteriological examinations and cultures at the City Hospital during the past year, for which I am indebted to Dr. F. H. Williams and Dr.

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[*] Bul. Harvard Medical School Asssociation.

[†] City Hospital Reports, Fourth Series, p. 165.

Councilman, who made the experiments show that in a certain number of these cases the Klebs-Loeffler bacillus is present. Not infrequently, too, retraction of the soft parts has been observed from obstruction of the larynx and trachea, and intubation has been necessary. Post-diphtheritic paralysis has occurred. In short, true diphtheria has run its course coincidently with scarlatina in some of these complicated cases. Occasionally they come in groups, several from the same family, and are always isolated. The great fatality from sepsis, and the occurrence of croup, would also point to the probable presence of the bacillus diphtheriæ. The ordinary scarlatinal sore throat, the streptococcus-pseudo-diphtheria, does not produce croup by extension of the false membrane to the larynx and bronchi.

Six cases of measles presented also the clinical appearances of diphtheria, and three of them were fatal; but no cultures were made.

Turning to the diphtheria department, we find always a high mortality, higher than that which prevails in the city at large, but not higher than would be expected from the bad, even hopeless, condition of many patients when admitted. They come for operation as the last resort, when the advantage of early tracheotomy or intubation has been lost. The extension of membrane to the trachea and bronchi, profound sepsis, or pneumonia, renders all efforts to save life unavailing. More than half the deaths occur within four days after admission. Of 759 cases admitted between July, 1890, and January, 1893, 352 proved fatal, or 46 per cent. 246, or nearly one-third, required operation for obstructed respiration,— a much larger proportion than obtains in general practice. Of the remaining 513 cases, three-fourths recovered; and that is the usual percentage at the Hopital for a series of thirteen years in cases in which no surgical relief has been needed. Most adults are treated with success. That makes the record favorable as compared with hospitals where children only are received, and in which the death-rate is 70 per cent., sometimes 80.

For instance, Henoch, of Berlin (Charité Annalen, vol. x.), reports 208 deaths in 319 cases, 65 per cent.,—a mortality of 45 per cent. in the pharyngeal cases, and nearly 90 per cent. in the croupous. 16 only survived out of 145 tracheotomies.

The statistics of Besnier show a similar result in the children's hospitals of Paris, where the mortality ranged from 54 per cent. in summer to 83 in winter. Of 919 cases admitted in the last quarter during seven years, the mortality was 71 per cent.

Roux and Yersin found the diphtheria bacillus in 61 out of 80 children in hospitals. In 19 this organism was absent, and they all got well; but one-half of those who had diphtheria died.

It is the same in all large cities, the most fatal and the most distressing to witness of all the diseases with which we have to deal.

A point of much interest, in view of the advances in bacteriological science, relates to the diagnosis of mild cases of diphtheria, and their differentiation from other forms of faucial inflammation which are so often sent to hospitals as diphtheria.

Besides 759 cases mentioned above, in the same period 113 cases of non-diptheritic tonsillitis and laryngitis were sent to the City Hospital as diphtheria. There were also 23 cases recorded as "doubtful" from a clincal point of view. In such cases, if diphtheria exists, it cannot be determined by ordinary inspection, nor can it always be positively excluded. Time usually shows. These patients were isolated as well as possible in the diphtheria ward; and none took diphtheria so far as known. All got well but one, a case marked as "doubtful."

The punctate spots on the follicular exudate, their localization on the tonsil while the uvula and pharynx remain free, the chills, headache, high fever, and pains in the limbs at the outset, the easy removal of the secretion by swabbing,— these and other signs often suffice to distinguish acute follicular tonsillitis from the more insidious development of diphtheria. But sometimes these appearances prove deceptive. In a day or two the membrane develops, and the bacteriological test shows the Klebs-Loeffler bacillus.

The streptococcus-pseudo-diphtheria can only be determined by culture experiment but it is a relatively mild affection.

Therefore, the following suggestions are obvious:—

First, the necessity for bacterial culture in all doubtful cases.

Second, the desirability of isolating such cases in the interval.

During the last year or two careful bacterial examinations have been made at the Hospital by Dr. F. Williams, and cultures in many cases by Dr. Councilman. These researches will be published at an early day. Much time and skilled assistance are necessary to carry out this work thoroughly; but in the new buildings there will be ample facilities for the prosecution of this branch of scientific study.

It is interesting to note that these numerous patients with non-diphtheritic inflammations of the throat showed little or no tendency to contract diphtheria. Many were adults. The extreme susceptibility as well as the great danger to life, is limited to early childhood, under circumstances which involve the closest proximity to the source of infection. Transmission through a third person is probably infrequent. Most nurses undergo daily extreme exposure with impunity, while the few susceptible ones sooner or later take the disease. Many acquire the utmost confidence in their immunity. Sad casualties, however, have occurred, both to House Physicians and to nurses, whose professional zeal and devotion to duty have proved stronger than their desire for self-protection. The presence in the community of a body of thoroughly trained and fearless nurses for this often terrible malady is a boon which has been appreciated by many a suffering family.

Diphtheria Treatment.—The indications for treatment are: 1. The maintenance of the strength of the patient. 2. The destruction of the bacillus by local applications. 3. The elimination of the germ-product (tox-albumen), which pervades the system, and lingers long after the membrane has disappeared.

General Measures.—After nutriment, alcoholic stimulants, in large and frequent doses, claim the most important place in our efforts to sustain the ebbing strength. Young children may take several ounces of brandy daily with good effect. Digitalis and other cardiac stimulants have little influence. The tincture of the chloride of iron is largely used to combat the anæmia which so rapidly develops. Oxygen by inhalation, as advised by Brétonneau in 1821, has value in prolonging the struggle against asphyxia.

But, unfortunately, in many cases, vomiting, from gastric or pneumogastric irritability, makes sustenance difficult. Paralysis may prevent swallowing. The rectum soon becomes intolerant of nutritive enemata, and then the stomach tube is the only resort. If the membranes invade the larynx, early tracheotomy or intubation saves many cases in which the trachea and bronchi remain free; and a certain number of cases with croup get well without operation. Steam often relieves the breathing, temporarily at least. After profound septic poisoning has occurred, with masses of enlarged glands and brawny neck, foul nasal discharge, and, perhaps, uncontrollable hemorrhagic oozing from mouth and nose, we can only try to promote euthanasia. Antiseptic drugs are of little or no value internally.

Many bad cases, however, and some desperate ones, are carried through by careful feeding and stimulating, good nursing, and persistent local treatment.

Local Treatment.—Since the agency of the bacillus diphtheriæ has been more fully recognized, renewed efforts have been made to find substances which will remove the exudation and destroy the underlying bacilli. Here, again, we revert to the advice of Bretonneau, who says: "Tonsillar diphtheria, by its vicinity, threatening the air-passages with imminent danger of extension, requires the most expeditious and complete local treatment." Nitrate of silver was his favorite remedy, and in enormous quantities. But there are obvious objections to the use of nitrate of silver and the strong mineral acids which do not apply to some of the milder agents.

Here it must be born in mind, with regard to persistent local treatment in general, that the strength of the child is to be carefully considered, and the extent to which the process has gone,—whether the pain and exhaustion of frequent topical applications to the throat and nose of a frightened and struggling patient are not more harmful than any benefit to be derived therefrom. Routine treatment may be very bad. In some cases, one or two applications a day, and those in a recumbent position, may be all that can be safely attempted. In others, the discipline of the gag may be salutary.

Touching the tonsils two or three times with chromic acid, at an early stage, may suffice to remove the deposit; and a spray of corrosive sublimate, 1 to 10,000 is destructive to superficial germs. Loeffler's culture experiments showed, however, that a strength of 1 to 1,000 for twenty seconds was necessary to kill the deeper bacilli in the media employed. Even the weaker solution, 1 to 10,000, cannot be used with impunity in young children.

Carbolic acid, 5 per cent, combined with alcohol, sterilizes, but may also be toxic.

Chlorine water and chloride of lime in strong solutions are active disinfectants. The former substance, injected beneath the membrane by means of a syringe devised for the purpose, was thought by Dr. A. Seibert to be the strongest, safe remedy, the solution thus reaching the active bacilli in the deeper tissues. This author thinks that the superficial exudate is of little importance and inert (Archives of Pediatrics, 1891).

This is open to question, however; and the decomposing membrane can in many cases be readily cleared away by the peroxide of hydrogen. The action of this agent, if of sufficient strength, is very striking, the exudate disappearing at once in an effervescent froth, and leaving the surface free for the action of other germicides, of which corrosive sublimate must be regarded as the most powerful, and, if not too frequently applied, comparatively safe.

Hydrogen peroxide in 50-volume solution has been used at the City Hospital by Dr. F. H. Williams, as described in his paper published last year. It rapidly clears the throat of membranes and of odor and has no harmful effect upon the sound tissues. Neither is it poisonous. Frequent spraying with the 10-volume solution often suffices to keep the diseased surfaces clean, to prevent the spread of the membranes, and to check glandular swelling and sepsis. It may be used with care in the nose. The pain of all local applications should be mitigated by cocaine.

Loeffler found salicylic acid, permanganate of potash, chlorate of potash, resorcin, iodine, and many other substances relatively poor germicides, except the very strong solutions of some of them.

Primary nasal diphtheria is probably more common than is supposed and a not infrequent source of unsuspected danger. The secondary involvement of the nasopharynx in ordinary cases adds greatly to the danger of sepsis through the lymphatics. But caution is required in the employment of the nasal douche, syringe or atomizer, which the impervious passages render very painful. Acute inflammation of the middle ear with bloody discharge is a common result when the fluids are forced through the Eustachian tube. Therefore, it is very difficult to disinfect the nose in young children; and the gentle introduction of warm, mild, saline solutions and vaporized spray is best tolerated.

Not to dwell at length upon the dangers from cardiac and respiratory paralysis, a rapid pulse during convalescence must always be regarded as a warning that recumbency is essential. Irregularity in the beat, pallor, or vomiting, may be the forerunner of collapse from pneumogastric neuritis. Absence of knee-jerk may develop very early or not until very late in convalescence; and the knee-jerk may be normal throughout, even with paralysis of accommodation and of the soft palate, slight in degree. Muscular paresis often goes unobserved. Strychnine is the best remedy, by the mouth or subcutaneosly; and with children it is a good plan to administer tincture of nux vomica, one to five drops, three times daily, from the beginning of the illness.

French and German observations as to the nature of the subtle virus of diphtheria show that sterilized cultures from the membrane yield a soluble substance, probably a tox-albumen, which kills animals.

As the Klebs-Loeffler bacillus is found in the throat and nose some time after the disappearance of the membranes this accounts for their occasional recurrence for several days. Disinfecting sprays and gargles should not be too soon abandoned; and the patient should be isolated for a sufficient length of time to insure the safety of others, seldom less than one month. The elimination of the poison may be very slow, and should be aided by mild salines and diuretics, baths to promote free action of the skin, tonics, and gentle exercise in the fresh air. Mental and nervous depression may persist for many months.

"Doctor," said little Emily, "do you know that a baby that was fed on elephant's milk gained twenty pounds in one week?"

"Nonsense!" exclaimed the doctor; and then said whose baby was it?"

"It was the elephant's baby," replied little Emily.

REMARKS UPON THE TREATMENT OF STRICTURE OF THE SIGMOID FLEXURE AND OF THE FIRST PORTION OF THE RECTUM.*

JOHN B. DEAVER, M. D.†

MR. PRESIDENT AND FELLOWS: My object in offering a few remarks upon stricture of the sigmoid flexure and of the first portion of the rectum this evening is to obtain the views of the Fellows present upon this, which is certainly a very important subject and to place upon record a case of stricture of the terminal portion of the sigmoid flexure of the first portion of the rectum, recently under my care, in which the passage of a flexible rubber bougie (Wales) but one size French scale, larger than that which had been passed many times before, caused perforation of the rectum below the stricture, resulting in the death of the patient within twenty-four hours thereafter from peritonitis. In order to discuss this subject to the best advantage I may be permitted to refer to one or two points in the anatomy of the rectum, also to say a word or two concerning the diagnosis of stricture situated beyond reach of the finger.

The rectum does not, as is usually described, begin at the rim of the pelvis opposite the sacro-iliac synchondrosis, whence it extends to about the centre of the third piece of sacrum and descends in front of the sacrum, the coccyx, etc., but commences at the terminal part of the omega loop, to which attention has been called by Treves as being the shape of the sigmoid flexure, and not "S" shaped in answer to the description in the text-books on anatomy. Careful examination by myself of many bodies has confirmed the above statement. All of the omega loop, which includes the first portion of the rectum, occupies the pelvis in the adult. It will be thus understood that the first portion of the rectum makes with the second portion a decided angle; therefore, an instrument of the calibre of the normal bowel, unless it be a flexible one which will pass through the third and the second portions, will not prove anything regarding the calibre of the first portion. Again, from the relation borne between the second and the first portions of the rectum much may be learned about the latter if it be not infiltrated, upon introducing the finger into the second portion, through the walls of which the infiltration may be detected. The best form of flexible rubber bougie is one which is hollow, as is the Wales instrument, to the lower end of which can be attached a fountain or Davidson syringe, and water thrown through this, favoring its passage by drawing out of the way the folds of the mucous membrane which would otherwise form an obstruction to its introduction.

The diagnosis of structure of the second and third portions of the rectum is readily made by the sense of touch. When the index finger is not long enough to reach beyond the second portion with the patient lying on the back, it may be done with ease if the patient be turned upon the left side and the thighs slightly flexed upon the abdomen and the finger introduced into the anus from behind, as the tissues of the perineum can be carried a little distance in advance of the web of the index and middle fingers. Contraction in this part of the bowel can often be diagnosed by the introduction of a short, flexible Wales bougie, but the finger is the more trustworthy instrument. This, too, is the only portion of the bowel where we will all admit that the operation of proctotomy for the relief of a contraction is admissible. The soft, flexible rubber bougie is the only instrument that can be carried safely as well as surely through the upper portion of the rectum and the sigmoid flexure. The use of the non-flexible rectal bougie is not only an unsafe instrument, particularly where the stricture is situated beyond the second portion of the rectum, but one which may mislead the surgeon in making a diagnosis of stricture when it does not exist.

The first portion of the rectum, like the sigmoid flexure, is connected to the back part of the abdominal cavity by a reflection of the peritoneum, the meso-rectum. On account of the bend made by the junction of the first and second portions of the rectum, it can be readily seen how the point of a non-flexible bougie is arrested by contact with the wall of the bowel at this point, which offers resistance to its further passage, and a diagnosis of a pathological obstruction made; or it may be that the bowel, owing to the meso-rectum which, if preternaturally long, will be carried in advance of the point of the instrument to or beyond the median line in the neighborhood of the pubis, while if the instrument by chance should pass into the sigmoid flexure, the latter, owing to the meso-sigmoid, may be carried to or beyond the median line in the neighborhood of the umbilicus, which, in either event, might give rise to the belief that the bougie had passed into the bowel beyond, if not through, a supposed stricture.

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* Read before the Philadelphia Academy of Surgery.

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There is a question of doubt in the minds of some as to the possibility of being able to carry a flexible rubber tube or bougie through and beyond the sigmoid flexure. This has been tried upon the dead body in a number of instances, and, not having proven successful, the deduction has therefore been made that it is impossible to do it in the living subject. While I am aware of the difficulty attendant upon the introduction of an instrument into the descending colon in the dead body, due chiefly to the absence of muscular contractility, which facilitates the passage of the instrument, on the one hand, and offers a very decided barrier against its introduction, on the other, also to the absence of the normal moisture in the shape of the mucus, I cannot admit this to be so.

We well know that it is much easier to introduce a bougie through the normal urethra in the living subject than it is in the cadaver, and yet this ought to be more readily accomplished in the case of the urethra, where counter-pressure can be brought to bear to aid in the introduction of the instrument than in the case of the bowel. I have very satisfactorily demonstrated upon many occasions the possibility of being able to circuit the sigmoid flexure rectal bougie and the long flexible colon tube. In certain cases of intestinal obstruction I regard the passage of a soft, flexible tube into the sigmoid flexure, through which water can be thrown and the capacity of the large bowel ascertained, an important aid in the diagnosis between obstruction of the small and obstruction of the large intestine.

With the subjective symptoms of stricture of the large bowel present, namely, constipation, or may be attacks of diarrhœa, the passage of ribbon-shaped stools or of choppy stools covered with mucous and blood, or preceded or followed by the passage of mucous and blood attended by tenesmus, the lower portion of the rectum being intact, as proven by a digital examination, it does not absolutely follow that a stricture is the cause in all instances, as we may see this train of symptoms consequent upon a sub-acute or chronic catarrhal inflammation of the colon, of the sigmoid alone, or in ulceration of the sigmoid flexure; therefore, before we can get more definitely at the exact condition of affairs it will be necessary to resort to instrumental interference in the introduction of graduated sizes of flexible rubber bougies, when a diagnosis can generally be arrived at with a very fair degree of certainty. This should be done with all due care, and preferably by one experienced in the use of these instruments, as it has been demonstrated, particularly in the case I reported to-night, that serious results can accrue from even the passage of a soft instrument, which argues strongly against the use of non- or semi-flexible instruments. From the relation the first portion of the rectum holds to the second when the former is the seat of extensive thickening or the walls contain a growth upon digital examination this can usually be detected. In this class of cases, as in disease of the second and third portions, if in the female, much can be learned by careful digital examination of the vagina. I have on several occasions been able to feel with the finger masses in the first portion of the rectum, as well the presence of a growth which had assumed some size in the terminal portion of the sigmoid by carrying the vault of the vagina well in advance of the examining finger, aided, too, by counter-pressure made over the abdominal walls. Further, I believe these examinations are better made without ether, having the feelings of the patient to guide us and with less risk of injuring the bowel.

Where a mass is suspected in connection with symptoms of stricture, which would suggest malignant disease, there is considerable to be gained, however, by giving the patient ether, under the influence of which the abdomen can be palpated more satisfactorily. Another means of diagnosis, that of dilating the sphincter of the anus and the introduction of the hand into the rectum and the sigmoid, I have never had the courage to do. In cases of great doubt, rather than resort to the last procedure, I deem it more advisable to do an exploratory abdominal section. Exploratory abdominal section, however, done for the purpose of diagnosis in the questionable cases of stricture of the sigmoid and the first portion of the rectum, I am not a strong advocate of, as I think that a diagnosis in the majority of cases should be made without resorting to so complicated a measure. While I am aware of the little risk attending an exploratory abdominal section under strict cleanliness, I think the principal objection to be urged against it is that it lessens the responsibility of the surgeon as a diagnostician. Apart from this, I fear the modern tendency is too much in the direction of exploratory incisions in other regions of the body as well as the abdominal cavity, for diagnostic purposes.

The operation should be the natural sequence of the diagnosis and not the diagnosis to the operation. Perfecting one's self in diagnostic attainments is certainly more creditable to a surgeon than to feel forced to have to open the belly cavity to determine that which may be done without.

The majority of cases of benign stricture involving the first portion of the rectum are amenable to treatment by either the bougie or colotomy. Stricture of the sigmoid flexure, very rare except when of malignant origin, is not nearly so favorabe for gradual dilatation by the bougie. Stricture here located, be it benign or malignant, if the inflammatory process has not advanced too far to permit of resection and anastomosis, or perhaps circular enterorrhaphy, the most that can be hoped for in the majority of instances is the establishment of an artificial anus in the loin.

The choice between iliac and lumbar colotomy must depend upon the merits of each case; ordinarily I prefer to make the operation through the loin. The only advantage I can see in the anterior (iliac) operation is the opportunity it affords to determine definitely the condition of the bowel, if a resection and anastomosis or enterorrhaphy is possible, and, if nothing short of an artificial anus will suffice, the making of it at once.

In a paper I read before the Philadelphia County Medical Society two years ago upon "Lumbar versus Iliac Colotomy," I took the ground that the lumbar operation was the more preferable, inasmuch as the diagnosis of the condition rendering the operation of colotomy necessary should, in the majority of the cases, be made without having to open the peritoneal cavity, as is done in the iliac operation.

In benign stricture of the sigmoid flexure and of the first portion of the rectum, I recommend gradual dilatation by means of the flexible rubber bougie. When this is not possible, more radical measures must be adopted. In malignant stricture of the above portions of the bowel the bougie can do nothing other than harm; directly, by hastening the diseased process, and, indirectly, by misleading the patient in having him believe that an operation will not be required. I believe the earlier radical operative interference in malignant disease of the bowel is instituted the better, and if the practice was followed in all instances patients' lives would certainly be very materially prolonged and, in some cases, the disease perhaps be eradicated by removing it while yet local. What holds good in the uterus and elsewhere regarding affections of this character, holds equally good in cases of the bowel, the difficulty in affections of the latter organ being that not exposed to the sense of sight the diagnosis cannot be made with the same degree of certainty as in like conditions of the uterus, the breast, etc.

The advisability of furnishing the patient with a bougie and instructing him to pass it himself I am inclined to question; I think this is better done by the surgeon. In addition to instrumental and operative treatment, much is to be gained by constitutional treatment, particularly if the case be of specific origin; but unless the history clearly points to this, we should be careful not to push the treatment too far, for fear of the debilitating effects; by attention to the general health, by the administration of tonics, by advising the proper diet, by giving tonic laxatives to have the bowels moved daily.

In cases where tenesmus is excited by the presence of a collection of mucus it is advisable to introduce a long, flexible rubber tube beyond the stricture, through which the bowel can be irrigated with warm water or with mild antiseptic astringents.

The following is the case I have referred to above: F. W. R., aged about thirty, consulted me July 27th, stating that he had a stricture of the large bowel, for which he was passing at intervals of from four to five days Nos. 9 and 11 Wales bougies by the advice of his physician. Upon being questioned, he described the symptoms characteristic of stricture of the sigmoid flexure or of the latter and first portion of the rectum. He further stated that without the aid of medicine taken internally or the use of enemas it was impossible for him to have a passage. Digital examination of the rectum revealed nothing other than a rather capacious organ. Examination with the bougie showed the presence of an unquestionable obstruction nine inches within the anus. I advised continuance of the local treatment, but disapproved of his using the bougie himself. I passed a bougie up to the time of his last visit to me, when, upon introducing one a size larger than the one usually used, namely, No. 12—which I had also passed before with but little difficulty—as the point of the instrument was engaging in the stricture he suddenly lurched forward upon the operating chair, and before I could withdraw the instrument he rebounded, as it were, upon the point of the bougie. This was immediately followed by severe abdominal pain. I feared the bowel had been penetrated on the anal side of the stricture, but was not certain, as the instrument was withdrawn clear of blood; neither was there any blood passed after its withdrawal. I advised that he go to the hospital, where he would have the benefit of absolute rest and at the same time give me the opportunity of having him closely observed. Contrary to my advice he went to his place of business but came back to my office some time afterward, complaining of the pain as when he left me earlier in the morning. He now consented to go to the hospital. The pain was so severe as to require large doses of morphine to relieve him. He would not consent to an abdominal section, therefore I was powerless to do other than administer abdominal anodynes, counter irritants, etc. He died the following night. The abdominal walls remained perfectly rigid, with the absence of tympany until four hours before he died, when there was pronounced distention. An autopsy made shortly after death showed the presence of a purulent peritonitis and a linear stricture involving the terminal portion of the sigmoid flexure and the first portion of the rectum. The bowel immediately below the stricture, which was very much dilated, with the wall nearly as thin as tissue paper, showed a perforation. Upon opening the bowel there were present cicatrices which were evidently the result of ulceration. There were present old adhesions in the abdominal cavity in the neighborhood of the descending colon and sigmoid flexure. Upon opening the chest there were present adhesions at the apices of the lungs. No further evidence of organic disease.

A few hours before his death, in a conversation with his mother, I learned, much to my surprise, that he had for some time back, been giving himself an enema after each meal; this, to some extent at least, accounted for the very much dilated and thin condition of the wall of the bowel, rendering it liable to penetration by the bougie.

Flossie is six years old. "Mamma," she asked one day, "if I get married will I have a husband like papa?"

"Yes," replied the mother, with an amused smile.

"And if I don't get married will I have to be an old maid like Aunt Kate?"

"Yes, Flossie."

"Mamma"—after a pause—"it's a tough world for us women, ain't it?"

Doctor—"Well, Dennis, did you take the pills I sent you?"

Dennis—"Indade, doctor, an' I did not; ye wrote on the box 'One pill three times a day,' an' I've been waitin' till I see you to ask you how a man was to take a little bit av a pill loike that three times in wan day?"—*Harper's Weekly.*

MEDICAL STUDENTS IN SWITZERLAND.—The number of students in the medical faculties of the universities of Switzerland during the summer semester of 1893 are officially stated to have been as follows:—Zürich, 297; Geneva, 224; Bern, 224; Basel, 152; and Lausanne, 84.

REPORT OF CASES.

J. H. VOJE, M. D., OCONOMOWOC, WIS.

ABSCESS OF THE LUNGS.

During the summer of 1887 I was called to see Mr. F., age twenty-eight. I found the patient propped up in bed with pillows and apparently in the last stages of consumption—breathing with great difficulty; profuse perspiration; great emaciation; rattling cough; profuse expectoration; temperature 104°; pulse 135; livid club-shaped fingers; but no tubercular history.

I thought a further examination almost useless. However, on attempting to percuss the back, I found the integument bulging and with fluctuation a hand-breadth below the angle of right scapula. After a moment's reflection I opened the abscess with the bistoury. About a pint of pus and tissue-shreds escaped. Coughing was set up, causing an increased flow of pus and air bubbles. After the flow had mostly ceased, I injected, at intervals, a sherry-colored solution of iodine, some of which was coughed up, the balance returning through the opening in the back. A large dressing of sublimate-gauze was applied, the patient feeling greatly relieved, being able to rest with the head much lower. A tonic mixture was prescribed and proper diet ordered.

The next day found the patient much improved. I had the family inject the iodine solution three times a day. Some of this the patient would cough up. The patient continued to improve from day to day, the discharge and cough getting less and less, and no temperature after two weeks. He came to my office in five weeks, with a small fistula in the back. This soon healed, and he has been well ever since, working in the pinery every winter.

CASE II.

Mrs. B., aged thirty-two, married, one child, consulted me during the spring of 1891 about a swelling on the right side of the back, just below the angle of the scapula, which had been growing for several weeks. The patient had a tubercular history, a sister having died with pulmonary tuberculosis; had been losing flesh for the last year; had evening temperature, rapid pulse and night sweats. The skin was not discolored over the swelling, but, as distinct fluctuation was present, I made a 2½-inch opening. When the pus escaped, a fit of coughing was set up and more pus and air followed through a small opening between the seventh and eighth ribs. An emulsion of iodoform was ordered to be injected twice a day, and the wound was reported to be healed in about four weeks. But the bulging returned in the back, of which I was not at once informed, and when the patient reported, the abscess had dissected in different directions, calling for several long openings. All were scraped, stuffed with iodoform gauze and the fistula leading to the cavity injected twice a day with five per cent. solution of pyoktanin in dilute alcohol, about four drams being injected each time. This would set up a severe coughing, followed for several hours by an intensely blue-colored expectoration.

The patient improved, soon gained in flesh, lost her night sweats and temperature and had a good appetite. The cavity became smaller and in about ten weeks all was healed, remaining so ever since. The patient is doing all her housework. Her pulse, however, is constantly over eighty, and the *habitus phthise* still present.

TRIPLE HERNIA OF THE LINEA ALBA.

Mrs. S. had undergone operation for a a small parovarian cyst during September, 1891. She made a good recovery. The abdominal wound united firmly. After returning home she soon became pregnant, and two months after confinement reported with a very large triple hernia in the linea alba at the site of the cicatrix, caused, of course, by the distension of the uterus so soon after the operation. No contrivance would hold the enormous hernia in check, and the patient readily consented to an operation. During January, 1893, the patient was chloroformed, the integument over the hernia lifted up by an assistant, to cause the intestines to drop back into the abdominal cavity, and while thus held high it was freely divided. I could now see into the abdominal cavity through three not very large openings. These were cut into one with the scissors, and all cicatricial tissue excised. The edges were thoroughly freshened, the distended integument trimmed, and the wound closed with strong silk, which I think fully as efficacious as silver wire. Recovery was rapid and complete. The patient was kept in bed for three weeks, and when discharged furnished with a London abdominal supporter. She is well to-day.

I think that herniæ in the linea alba occur more frequently than reported. The only cure is the radical operation.

HAIRPIN IN THE FEMALE BLADDER.

During February, 1893, a somewhat anæmic but otherwise well-nourished nineteen-year-old farmer's daughter presented herself at the Institute, stating that she had had a hairpin in her bladder for over two weeks. She said that it had slipped away from her during an attempt to relieve an intense itching and pain at the neck of the bladder. Masturbation was denied, nor was there any marked signs of it, nor was the urethra dilated or easily dilatable. The urine was turgid and slightly decomposed.

Some fruitless efforts had been made by other physicians to remove the pin with forceps, etc. The only inconvenience the girl experienced from its presence was a little pain in the hypogastric region and frequent micturition. I convinced myself of the presence of a foreign body in the bladder by a sound. The patient was given a very warm, prolonged bath, and the bladder several times washed out with a boric acid solution. I injected into the tissue around the urethra a four per cent. solution of cocaine in two per cent. carbolic acid water, until a grain of cocaine was consumed. After this I began dilatation with Simons' urethral dilators—set of seven, the smallest being ¾ cm. in diameter, the largest 2 cm. (¾ inch) and 6.3 cm. (2½ inches) in circumference. As the first dilators passed without trouble, I omitted the otherwise practiced incisions at the orifice of the urethra. For Nos. 5 and 6, one and a half minutes, and for No. 7 two minutes were sufficient, dilatation being completed in six minutes, and the patient suffering no pain. The forefinger was easily introduced, but at first nothing felt. When I turned the hand to explore that portion of the bladder which is attached to the pubic bone, I came in contact with one branch of the pin, which was firmly pressed into the wall of the bladder. Some manipulation, aided by the other hand from without, succeeded in dislodging the pin and bringing it down. To my dismay I found that the double open end of the pin presented. I wished for more fluid in the bladder, but did not want to withdraw the finger that I might inject more, for fear of causing unnecessary pain. The bladder had firmly contracted over the other end of the pin and the attempts at turning were fruitless. I decided, therefore, to bring the pin out point first, and succeeded in gradually working both points below my finger, which was now firmly grasped by the sphincter, into the neck of the bladder. Putting a corner of the finger nail over one point and pressing the other against the wall of the bladder with outside hand, and moving the forefinger carefully outward and inward, I succeeded in engaging the pin in the urethra. Keeping up rotary and up-and-down movements, pressing always from without, both points came soon into view, when I grasped it with a pair of forceps and removed it along with the finger. Nine minutes accomplished the removal.

The pin was of the large, straight, old-fashioned kind, three inches long and very little corroded. The urethra contracted at once, hemorrhage being almost nil and no tears seen. No incontinence followed. The bladder was washed three times a day for two days with a solution of borax and boric acid. The urine became normal and the patient was discharged well.

SETTLED.—"The whole question can be settled by one word," said the man who thinks Bacon wrote about everything we know of except After the Ball.

"What word is that?"

"Hamlet." There's the whole cipher wadded up into the title of that one play."

"I don't quite follow you."

"Of course you don't. That's what makes it a cipher, you see. You have to study it out. Now I've studied it. Anybody with an idea of the construction of the English language can see that 'Hamlet' is a diminutive of 'Ham.'"

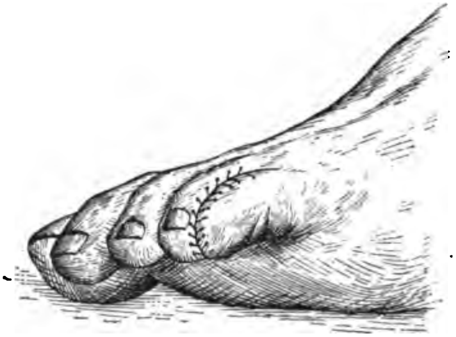
"Y-yes."

"So, instead of using his own name, Bacon used the very next thing to it, and there you have the whole business just as plain as day."—*Washington Star.*

A NEW METHOD OF CURING INVETERATE SOFT CORNS BETWEEN THE TOES*

A. M. PHELPS, M. D.,† ~~NEW~~ YORK.

We all frequently meet with cases of soft corn, occurring particularly in the working classes, between the toes. They are extremely painful, crippling the patient and rendering life almost unendurable. These cases come to the hospital and ask to have the toes amputated. Such corns are usually treated conservatively, and are cured, but immediately relapse. Deep sloughing ulcers are frequently seen.



A simple procedure which I have followed many times during the past few years answers admirably and saves the toe. It consists in removing all of the toes, removing the corn, and stitching the two toes together, as seen in the figure. This procedure does not in the least impair the usefulness of the foot; whereas the removal of the toe must necessarily do so to a certain extent.

Patients upon whom I have operated in this manner have expressed themselves as soft tissues on the inner side of two of the entirely satisfied, and I am certain that if I had a soft corn that caused me much trouble, I would have no hesitancy in having the operation performed, and the toes "webbed." The nail of the little toe should be removed.

LINCOLN ON MARRIAGE.

"In some respects," said the gentleman referred to, "Lincoln's memory suffers by reason of his having been the king of wit. There are those who think he never said anything serious. I cannot understand how such an impression exists, but I know it does. Why, he was one of the greatest philosophers I ever heard, and his philosophy was always modestly put, but at the same time he was always so sincere in it that he was at times almost solemn.

"I remember on one occasion he was talking about marriage, a subject in which he always took the most profound interest. He said that every man who contemplated marriage should stand over a doctor with a club and make him tell the truth in reference to the chosen partner for life, if there were no other way of getting it out of him. And he went further. He declared that the parents who would allow a girl to marry a man without knowing as nearly as could be known his physical as well as his moral condition deserved to be scalped. In his opinion the whole marrying business was wrong.

"He declared that fashionable girls too often were cursed with foolish mothers, who cared for nothing but to see their flesh and blood sold to the highest bidder. There was nothing funny in that sort of talk, was there? It ought to be framed and hung up in every home in the land. How few men knew the deeps of that master of men. What a loss to the world that he should have been taken away from it at the time when he was just being understood."—*Chicago Tribune.*

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* Presented at the Meeting of the Orthopædic Association in St. Louis, September, 1893.

† Professor of Orthopædic Surgery, University of New York; Professor of Orthopædic Surgery, New York Post-graduate School and Hospital; Professor of Surgery, University of Vermont; Surgeon to Charity Hospital; President of the American Orthopædic Association.

SOCIETY REPORTS.

PHILADELPHIA ACADEMY OF SURGERY.

December 4, 1893.

Dr. John B. Deaver read

REMARKS UPON THE TREATMENT OF STRICTURE OF THE SIGMOID FLEXURE AND OF THE FIRST PORTION OF THE RECTUM.

(See page 1005).

DISCUSSION.

THE PRESIDENT: I have recorded the following case in several places: Years ago I attended a gentlemen who, as a result of disease of the cervical medulla, was thoroughly paralyzed. Every day the intestines would fill with flatus, and I would introduce a tube beyond the sigmoid flexure and allow the gas to escape. This could be done in this case without the slightest difficulty. I do not know whether or not the relaxation from the paralysis had anything to do with it. I have tried to repeat the procedure since in the living subject, but have not succeeded. I have also read in some French authorities that it is impossible.

DR. THOMAS G. MORTON: I have knowledge of two cases of rectum perforation, neither of which was in my practice. The first case was a female of sixty or more years of age, who had been subject during the greater part of her adult life to constipation,for which enemata and mild laxatives gave relief. For a month or two before her death this condition had become more troublesome, and relief only partial; a digital examination by her physician, who pronounced double stricture with fecal accumulation and advised bougie dilatation; and shortly afterward made an attempt at digital stretching, which was followed by the introduction of a tube and enema. An hour later the patient went into shock, and then profound collapse, and died forty-eight hours later. The autopsy showed an organic structure, and a perforation of the bowel and general peritonitis, the injection having been thrown into the abdominal cavity.

The other case was a very similar one, intense pain followed the use of the dilator and injection, and the patient died very shortly of peritonitis. I have, however, treated very many strictures at the location mentioned by Dr. Deaver, where much relief was afforded by the use of bougies.

DR. T. S. K. MORTON: The reader of the paper stated that he had found a capacious rectum, and said that he believed that possibly the distention and weakening of the rectum were due to the frequent use of enemata. I call to mind an article by Mr. Thomas Bryant,referring to stricture of the rectum, in which he spoke of "ballooning" of the rectum as one of the symptoms. He regarded it as almost diagnostic of stricture. Mr. Bryant offered a number of theoretical explanations for the condition, all of which I do not at the moment recall. One was atrophy, from interference with nutrition; another, the retention of gas. He did not mention the possibility of its resulting from the use of enamata.

DR. DEAVER: I was especially desirious of reporting this case, as the perforation was made by a soft instrument—much more flexible and soft than is used by most surgeons. It is only in recent years that I have been induced to use the soft instrument. I was surprised to have a result of this kind with an instrument which will double on contact with the hands.

I recall the paper of Mr. Bryant to which reference has been made. I have noticed this ballooning of the rectum in many cases, and in some cases of acute mechanical intestinal obstruction from plastic peritonitis, appendicitis, etc. It seems to be associated with obstruction of the bowel, and perhaps in my case it was a consequence of the stricture; but I think that it is bad practice to use enemata at the rate of three a day, for fear of bringing about an atrophic condition of the bowel. In my paper I advise against the use of instruments in the rectum, as the finger is the best instrument; but beyond the second portion of the rectum we are not able to discover a stricture with the finger, and we must use a bougie. These are difficult cases to diagnose, and there is always an element of risk in the use of a bougie.

William G. Porter, M. D., read a

REPORT OF A CASE OF TETANUS.

Helmer E., aged twenty-three years; nativity, Sweden; occupation, machinist; weight, 214 pounds; height, six feet two inches. Patient presented an excess of adipose tissue; skin and mucous membranes pale; had had pneumonia in 1892; was addicted to the use of alcohol, especially beer.

He was brought to the Philadelphia Hospital on the fourth day of the disease at 1 A. M., November 11, 1893, with the history of having run a rusty nail in the sole of his foot, two weeks previously, while working in a cellar.

The wound gave no trouble, healing in a few days. Ten days after the injury, he noticed some pain upon swallowing. The next morning his jaws were stiff, by evening he could not open his mouth, his back was stiff and the seat of severe pain, which he described as feeling like a band of constriction, passing from the back around the abdomen and down into the legs. Upon admission the jaws were firmly locked, the masseters hard, risus sardonicus present. There was a moderate degree of continuous opisthotonus, the abdominal muscles were board-like, and when lifted from the stretcher to the bed he moved as if made of one rigid piece, there being no motion in any joint from his head to his feet. Paroxysmal spasms occurred every one to three minutes, increasing the contractions of all the muscles involved in tonic spasm.

His pulse was soft and rapid, heart-sounds weak, temperature, 99°; bowels had not moved for three days. An evacuation was secured by means of croton oil and a laxative enema. A little ether was given and a free and deep incision made where the punctured wound had been, it was thoroughly cleansed with bichloride (1:200) and a wet bichloride dressing applied. He was placed upon the combined bromides gr. xlv, with chloral gr. xv, every three hours. Nitro-glycerine gt. j. every fifteen minutes till three doses were given, then every hour till there was flushing of the face, then every two hours.

Urinalysis showed a high colored urine, specific gravity 1033, a decided ring of albumin, an excess of chlorides, and a few granular casts.

The full effect of the chloral was not secured till the third day after admission, when there was given by the bowel during the afternoon ʒij of chloral with ʒv of bromides. He now slept soundly, and during the sleep there was less arching of the back and some relaxation of masseters. The paroxysmal spasms, however, did not seem to be influenced by the chloral. Its use by the bowel was continued, giving it in such doses and at such intervals as seemed indicated.

A free perspiration marked the entire course of the disease.

Within a few hours after admission the temperature became normal, and remained so till the seventh day, when it began a slow but continuous ascent.

Feeding was not difficult, the nozzle of the feeding cup was placed between his lips and the contents found their own way to his throat, frequently, however, causing repeated spasms of the pharyngeal muscles. For the first few days he was eager for milk, and five pints were given daily, later he did not care for nourishment, but continually craved beer. Eggs were given in milk and with sherry wine.

During the seventh day of the disease there was much less pain in the back. There was considerable less spasm, patient expressed himself as feeling much better. His mind had been perfectly clear up to this time, but during the night there was a little delirium, and a slight tendency to pick at the bed clothes.

Eighth day: Lower jaw drops a a little during sleep, head not thrown back, paroxysms frequent but not severe. During the night considerable of delirium and some twitching of muscles and carphologia.

Ninth day: All continuous spasms had disappeared, mouth open, and a guard was placed between the teeth to protect the tongue being bitten during the paroxysms, which were marked by prompt snapping of the jaws. At 5.30 P. M. he had a prolonged and severe spasm, after which there was great muscular relaxation; urine and feçes were passed involuntarily, respirations became very shallow, no radial pulse could be felt, and he became profoundly unconscious.

At noon his temperature had been 104°; at 5.30 it was 106°; at 6, 107°; at 6.30, 108°; at 7, 109°. At 7.20 the heart ceased beating. Shortly after the cessation of respiration, one-half hour later, the temperature of the body was 111°. Antitoxine: Upon the evening of the seventh day the administration of antitoxine was begun. It was deeply injected into the muscles of the thigh twice daily in ascending doses. The first dose was 20 centigrammes, the last dose 160 centigrammes.

This treatment appeared to have no influence upon the symptoms. There were no local effects at the points of injection. The temperature had begun to rise before the first dose was given.

A post-mortem examination was not secured by the hospital authorities, but was, however, secured after the removal of the body. The membranes of the brain and cord were found intensely hyperæmic; the brain œdematous; the ventricles and central canal of the cord were distended with fluid. The brain and cord are preserved for further examination.

Heart flabby and relaxed. The blood in the auricles and great vessels was dark and fluid. Nothing noteworthy found in other organs.

For these notes and her untiring care of the patient, I am indebted to my very efficient resident, Dr. Emma J. Lucas. And for the opportunity of using the anti-toxine to Drs. Wm. E. Hughes and Carter, who furnished the material and made the injections.

DISCUSSION.

Dr. John B. Roberts: I have been much interested in Dr. Porter's account of the unsuccessful use of antitoxine in acute tetanus. I am inclined to believe, from what I have read, that most of the cases that have recovered have been mild cases, and that the more severe cases have not shown any very brilliant result from the use of such treatment.

Dr. Thomas G. Morton exhibited a patient aged twenty-two months on whom he had operated for

EQUINO VARUS WITH DISLOCATION OF THE ASTRAGALUS,

where he had removed the astragulus from each foot.

Dr. John B. Deaver exhibited a patient showing the result of operation for the

RADICAL CURE OF HERNIA BY BASSINI'S METHOD.

The operation was performed October 12th on account of temporarily irreducible hernia and the inability to properly control the hernia by a truss. This operation has the advantage of not confining the patient to bed for a long time. It consists practically of making a new inguinal canal. The hernia is exposed and the spermatic cord separated from the sac. The hernia is reduced and the sac tied off close within the abdominal cavity and the redundant portion cut away. The internal oblique and transversalis muscles, with the rectus, are then stitched to Poupart's ligament, the cord placed over these muscles, and the skin and superficial fascia over the cord. He used buried sutures of silkworm-gut, which were allowed to remain.

Dr. James M. Barton: On several occasions I have started to perform Halstead's or Bassini's operation, but when I have gotten to the ring I have found the hernia so old that there was practically no canal, one ring lying directly over the other, and as it seemed to me impossible to perform either of these operations, I have performed the MacEwen operation. In my earlier MacEwen operations I cut off all but four or five inches of the sac, when it was very long, fearing there might be sloughing if I retained it all; but in the latter operations I have used the entire sac, even when a foot long. I would ask Dr. Deaver if in these cases of large hernia, where the two rings practically correspond, he makes any attempt to do Halstead's or Bassini's operation.

Dr. J. B. Deaver: In answer to Dr. Barton, I would state that I have done very few of the Bassini operations, but in such cases as Dr. Barton mentions I have done Barker's operation, without, however, obtaining a permanent radical cure. This operation consists principally in tying off the sac at the internal abdominal ring. As Dr. Barton has pointed out, I think there would be some difficulty in doing Bassini's operation.

It is not good enough to have a sound mind; the principal thing is to make a good use of it.—*Descartes.*

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SATURDAY, DECEMBER 30, 1893.

EDITORIAL.

RETROSPECTIVE.

The passing year records many interesting and important events. In every branch of human interest there have developed new phases of old questions, new conditions to be satisfied or new problems to be studied and solved. In each branch there are recorded successes and failures. As the chronicles are closing, the optimist gazes through his telescope, leveled high above the present, and announces the near approach of a millenium; the pessimist immerses his lense in "pure cultures" of the filthiest of human dejecta, and by artificial light and high-power eye-piece detects some pathogenic germ in the body-politic and predicts speedy dissolution; while the thoughtful man with common sense, studying the past to prevent the future, discerns the balance on the right side, and with renewed courage pushes on for greater results. The world has grown no worse this year.

In America, A. D., 1893, will be memorable for magnificence and for misery. The Columbian Exposition witnessed the marvelous achievements of human genius. A beautiful vision of work performed was that White City, which was and is not, in a gloomy setting of business disaster and helpless misery which is and was not. Myriads of sight-seers striving to view life and myriads of unemployed struggling to sustain life. The World's Fair and the financial palsy have made the most marked impressions.

In medicine, the year has shown a steady and decided advance. Not indeed, as viewed from the financial standpoint of the individual practitioner, for the doctor's cash account is confessedly the most sensitive barometer of financial weather—the first to shrink before the coming storm and the last to rise in clearing weather. But from the standpoint of the profession the advance is positive and firm. Efforts to raise the standards of medical education and to require evidences of ability on the part of the applicants for license to practice, have met with public approval, and medical practice acts have been enacted in various states.

In the few as yet unenlightened commonwealths vigorous agitation is continued and gives promise of results in the near future.

The great schools now require a four-years, graded course. Smaller institutions will eventually reach this level or go of business.

The market for "chairs" in the larger schools is at present dull, it not being the season for state appropriations. The outlook for the spring trade is promising.

The threatened epidemic of cholera has proved an unmitigated blessing to public and preventive medicine. It has furnished a most efficient national quarantine system which displayed its value in dealing with the Yellow Fever scourge at Brunswick, Georgia. It stimulated the city fathers of large cities to effect municipal cleanliness beyond anything heretofore known. It aroused general attention to the necessity of public and private hygiene, and the results are evident improvements. If the people can be made to realize that more deaths annually result from infectious diseases having a permanent residence in this country than have occured in any epidemic scourge that has yet visited us, scarletina, diphtheria, tuberculosis, typhoid fever, la grippe, *et id genus omne* will be relegated to the limbo of small-pox.

Surgery has still usurped an undue proportion of medical attention, but the tendency now is to digest the immense amount of material swallowed rather than ask for more. Experience is busy settling values, sifting out the useful from the useless, accepting the first, rejecting the latter. It is being realized that antisepsis is not an unmixed blessing,and results are coming to light which show that if surgical cleanliness has wonderfully reduced mortality in older procedures,it has also stimulated 'priority seekers' to a rashness detrimental to their victims.

General medicine has suffered from this furor operandi and too little study has been given to general disease, which, after all, is of paramount importance to the profession at large. The reaction is healthy and progress in this line will be more evident in the near future.

The investigations of pathologists are slowly but surely yielding results that go far to place medicine on the level of a science. Pathology is really in its infancy, but it gives promise of marvelous achievement as it grows older.

Materia Medica has received a few useful additions among the proffered vagaries of manufacturers who desire to lead our Israel into a promised land flowing with milk and honey specifics.

The medical press has labored and brought forth a numerous progeny, mostly still-births but some which will survive and obtain a position in medical literature.

Medical societies have flourished as never before, and the free exchange of ideas thus afforded is of inestimable value to the profession and its ward, the public.

The closing year has shown a marked increase in knowledge and decided improvement in method in the profession and practice of medicine which guarantees greater progress in the coming year.

FUNCTIONS OF THE STOMACH.—The conclusions are:

1. The passage of the contents of the stomach into the intestine occurs at intervals through rhythmical opening and closing of the pylorus.
2. Fluid leaves the stomach more rapidly than more solid food. The (empty) stomach absorbs no water. While the water of sodawater is not absorbed by the stomach the carbonic acid is absorbed in large quantities.
3. Alcohol is absorbed in large measure by the stomach.

Sugar (grape, milk, cane, maltose) in watery solution is absorbed in moderate quantity by the stomach, in alcohol solution, in somewhat larger quantity. Dextrine, as well as peptone, is absorbed by the stomach.—*Centralblatt f. klin. Med.*

ABSTRACTS.

THE PHYSICIAN IN RELATION TO COURTS OF JUSTICE.

S. J. MONTAGUE, M. D., WINSTON, N. C.

In looking for a subject of interest in the department of State and Legal Medicine, I find two living and ever-present conditions confronting us—matters which affect and should interest every physician in the State, whether he practice in the largest city or in the most remote country district, whether he keep up with the latest information and fashions of practice, or be content to practice as he graduated, he should, for his own comfort and well-being and the honor and dignity of his profession, know something of his duties and privileges in a court of law. My reason for bringing these matters before the Society is that in certain instances the duties are so ill-defined by practice, and the privileges are so few, that I wish the earnest consideration and discussion of the conditions and expression of opinions in regard thereto.

The first condition to which I would call your attention is that in this State a communication, even of the most sacred and private nature from patient to physician, is not privileged. Privileged communications are those which, on grounds of public policy, courts decline to receive for the reason that their admission would entail greater mischief than their rejection, because of some collateral evil to third persons or to society in general. Where lives the physician who has not had communications made to him by patients to enable him to prescribe intelligently for them, who would not for any consideration disclose the communications. Yet, in the present state of the law, any one refusing on the witness-stand to answer all questions, would be guilty of contempt of court and subject to fine and imprisonment at the discretion of the judge. I believe that there are not many members of this Society who would not prefer to suffer fine and imprisonment rather than stand before the community properly dishonored for disclosing confidential communications and exposing their patients to shame and to be the jest of the vulgar crowd. The idea very generally prevails that we have this needed protection at common law, the same as is enjoyed by attorneys; indeed, two well-informed lawyers told me that this was the law, so reasonable and just did it appear. Lawyers have enjoyed this immunity from time immemorial, but physicians, spiritual advisers, and others, have it only by special statute. The Roman law protected physicians against disclosure of confidential communications, and in France it is a crime for a physician to divulge them. Many States of our country have enacted statutes making confidential communications privileged, and, so far as I know, the enacting of these statutes, so necessary for the good of society, has not been resisted. The statute of New York is in these words: "No person duly authorized to practice physic and surgery shall be allowed to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician or to do any act for him as a surgeon." This, with slight modifications, has been enacted in the following States and Territories: New York, Arizona, Arkansas, California, Idaho, Indiana, Iowa, Kansas, Missouri, Montana, Nebraska, Nevada, Ohio, Oregon, Utah, Washington, Wisconsin, Wyoming, Colorado, Michigan, and Minnesota.

I find, from "Greenleaf on Evidence," that the statutes of nearly all these States limit the privilege to such persons practicing physic and surgery as are duly authorized or licensed, thus very properly making a difference between regularly qualified physicians and irregulars, quacks and such like. It is held that these statutes extend protection also to personal representatives of deceased persons: "The purpose of the laws would be thwarted and the policy intended to be promoted thereby would be defeated if death removed the seal of secrecy from the communications and disclosures which a patient should make to his physician."

Consulting physicians and partners in the same office or practicing together in the same case, enjoy immunity under these statutes. Without the protection of a statute let us see how it would be with a physician called to see a woman bleeding to death after a criminal abortion, and what physician of much experience who has not had such cases? The patient, with danger of death impending, if the condition be not self-evident, makes a clean breast of the trouble to enable the physician to treat her to the best advantage, which having done, no matter in what way the case terminates, his next obligation is to report a crime to the prosecuting attorney or coroner, as the case may be, failing in which, he renders himself liable to prosecution for misprision of felony—concealing a crime. Who can contemplate with equanimity the physician having finished his professional work, now putting on the character of an informer, and leaving his patient in a worse condition than when she called him? Aside from the code of ethics, founded on the golden rule, and which must govern as honor abides with physicians, no one who would do this mean act could live in a decent neighborhood. What, then, must be done? I feel there will be no doubt in any reasonable man's mind as to the course to pursue. Duty, humanity, and innumerable well-made precedents say relieve your patient and hold fast against the world her confidences, but demand, for the sake of humanity, and not as a personal privilege, for the physician does not need it, that this common law injustice be superseded, as early as practicable, by the enactment of a prohibitive statute with proper penalties.

Having considered what a physician may not be allowed to disclose, it is now in order to discuss what he may say and the manner of giving testimony. As it is harder to open the mouth in wisdom than to keep silence, so this subject is more dificult than the preceding. Probably at no time does the average, conscientious physician appear at more disadvantage, and oftentimes have himself unjustly lowered in the eyes of the community than when on the witness stand, exposed to the cross-examination of opposing counsel. From the nature of his calling the ordinary doctor is not prepared to stand the ordeal of the witness-stand. Unused to controversy, rarely meeting his fellows even, in friendly discussion, and accustomed to giving arbitrary orders, and being obeyed without question, he gets little or none of the friction so necessary to enable him to stand with quiet ease the onslaught of counsel whose reputation and the life of whose client may depend on the doctor's discomfiture. It not infrequently happens that physicians of ability fail to acquit themselves in court to their satisfaction, while quacks, from the nature of their business, trained to withstand attacks and criticism, often leave on the unprofessional mind a good impression.

As physicians may be and are called to give evidence in court the same as other people, it is only intended to consider them here in the character of experts. Expert evidence is defined as "that given by one expert and specially skilled in the subject to which it relates or is applicable, concerning information beyond the range of ordinary observation." From this definition it is evident that, while it might not be judicious or in good taste for all physicians to set themselves up as experts, yet all properly qualified doctors are liable to be called as witnesses in this character, and now commences the trouble and question which has vexed and harassed physicians, perplexed courts and confused juries, and no doubt has often brought discredit on expert testimony, both to the profession and to the laity. The need of some change in the manner of procuring and giving this testimony is recognized, but as yet no remedy is at hand. That expert evidence is necessary for the proper administration of justice is admitted, and it is apparent that, without the help of skilled scientists, the detection of the most insidious forms of murder would be difficult, if not impossible. It appears that much study and thought, at various times, has been given to the matter of securing a better system than that which we have at present and which has been in vogue a long time, but whatever has been suggested is liable to abuses and dangers as is the present system. Almost the first idea that occurs to most people thinking about this matter is the selection of the expert by the authorities connected with the case, who, it is assumed, would choose only the most competent, but granting the best of motives to the fairest-minded officer, it must be admitted that he is seldom competent to judge of expert qualifications, and it seems only just and fair to let parties to a trial have every chance possible, which they could not have if experts could only be chosen by the authorities, and especially is this true when it is considered how the authorities are constituted. So it seems that until a more perfect system is evolved or elaborated, we must continue to see and hear conflicting and distressing testimony of scientific experts. The trials recently in New York of Harris, a medical student, and Buchanan, a physician, both charged with and convicted of, murdering their wives with morphine, have brought the matter of expert medical testimony prominently before the world. In the case of Harris, it seems that the prosecution relied principally upon the well known physiological effects of the drug, while in the case of Buchanan the reliance was mainly on the ascertained presence of morphine in the body which was declared to be present by no less specialists than Drs. Witthaus and Doremus. The defence then introduced Prof. Vaughn and Dr. Scheele, who testified and proved by actual illustrations before the court and jury, that color reactions identical with those found by the experts of the prosecution could be produced from ptomaines resulting from the decomposition of animal matter, and consequently that the persecution had not proven the existence in the body of the deceased of morphine. They also contended that only the actual isolation of crystals of morphia in a decomposing body would be sufficient evidence of its presence. The prosecution experts were, it seems, unhorsed, and had the color reactions for the proof of the presence of morphia been all, no doubt there would have been a failure of conviction. Dr. Scheele stated that these color tests used by the experts of the prosecution were not to be depended on, and were not now accepted by the most advanced Germans. This, however, is no new theory or statement, for certainly as far back in 1878, in the trial of Chantrelle, in Edinburg, for poisoning with opium, objection was made to the expert testimony that no opium was found in the body of the deceased, which was admitted, but evidence of morphia was found by color tests on the stained sheets on the vomited matter, but no crystals were found. It was held, then, and is held now, by the best writers on medical jurisprudence that the color reactions for the detection of morphine are more valuable than the slender prismatic crystals found under these circumstances which have no peculiar or definite form, and must be proved at last to be morphia, if they are, by these very color reactions. At this trial the prisoner, Chantrelle, was convicted and executed, the court regarding the objection to the color test as frivolous, and setting it aside. See "Taylor's Medical Jurisprudence, Eleventh American Edition, 1892." The ptomaine theory had not then attained to any notice nor is it now accorded the place it deserves in standard writings, if Prof. Vaughn's experiments are well founded, which they seem to be, and at any rate the prominence and importance attached to them at recent trials, and other places demand that thorough investigation by competent chemists be made and the claims either disproved or accepted and established. The contradictory evidence of scientific experts of international repute inevitably discredits such testimony, confuses medical men and imperatively calls for a revision of the analytic processes for the detection of organic poisons. No doubt the agitation of these matters will arouse the chemical talent of the profession, and before long definite and certain procedures to meet these cases will be established.

Probably the first case the average doctor will be called upon to give expert testimony in will be a coroner's inquest, and there is reason for believing that the dignity and importance of this legal proceeding is not sufficiently appreciated. It should, however, be borne in mind by the physician giving testimony at these inquests (it may be only in the presence of ignorance and oftentimes excited people) that his *words* are taken down, and he may be examined on the same at a higher court and in the presence of the most learned lawyers and physicians. If it is thought that death has not been due to natural causes, the medical witness should refuse to give an opinion without an autopsy, and even then when a sufficient cause of death is not found, as a conjectural opinion is liable to lead to unpleasant responsibilities. It is thought best for medical witnesses not to quote standard writers, but to confine themselves to facts within their own knowledge and experience. Should he quote so-called authorities, the other side would be allowed to quote in rebuttal, and a controversy of books without end might be brought on. A judge can at his discretion rule out all medical books as evidence. Medicine being a progressive science, the authors of the best text-books are not recognized as authorities, except by courtesy and common consent of the profession, as long as they serve best the purposes for which they were intended. Thus, what is good authority one day may not be the next, not having in the profession any corporate body to make and unmake standards. A physician, in giving evidence before a court, should not base his opinion as to the cause of a death on any one fact, unless that one be amply sufficient, but should take all of the known circumstances of the case into consideration—symptoms before death, chemical analysis, autopsie appearances, as well as the moral aspect. All these working in harmony to the same conclusion would form a good basis for an opinion as to the cause of a death. As a matter of course, the expert is looked upon as more than an ordinary witness. More respect and consideration is his due and more responsibility attaches to him, consequently his demeanor should accord with this idea. Called to testify to the truth, to the best of his knowledge and ability, and he should be well prepared on his subject in all its bearings, and refuse to be led into matters with which he is not perfectly familiar. It would seem that for witnesses occupying the dignified and responsible places of scientific experts intentional ex-parte testimony would be out of place, and there is good reason to believe that when men are governed solely by the nobler instincts of human nature, desiring truly in trials to discover only the truth, that much of the reproach and perplexity of scientific expert testimony will have vanished.

My object in presenting this subject to the Society is to draw attention to the unsatisfactory standing and discredited evidence of physicians in the courts, in the firm belief and hope that, once realized, the profession will be equal to the occasion, and that there will be a desire for reform promoted and a higher stand taken for the rights, the honor and the good name of a profession whose highest purpose is to benefit humanity.

The Rev. Dr. Talmage on the Country Doctor.

"Our country physicians have so many hardships, so many annoyances, I am glad they have so many encouragements. All doors open to them. They are welcome to mansion and to cot. Little children shout when they see them come down the road, and the aged, recognizine the step, look up and say, 'Doctor, is that you?' They stand between our families and the grave, fighting back the troops of disorder that come up from their encampment by the cold river. No one hears such thanks as the doctor hears. They are eyes to the blind, they are feet to the lame, their path is strewn with the benedictions of these whom they have befriended. One day there was a dreadful foreboding in our house. All hope was gone. The doctor came four times that day. The children put away their toys and all walked on tiptoe, and at the least sound said 'Hush!' How loudly the clock did tick, and how the bannister creaked though we tried to keep so still! That night the doctor stayed all night. He concentrated all his skill upon the sufferer. At last the restlessness of the sufferer subsided in a calm, sweet slumber, and the doctor looked up and smiled; 'The crisis passed.' When propped up with pillows, in the easy chair, she sat, and the south wind tried to blow a rose less into the faded cheek, and the children brought flowers—the one a red clover top, the other a violet from the lawn—to the lap of the convalescent, and Bertha stood on a high chair with a brush smoothing her mother's hair, and we were told in a day or two she might ride out, joy came back to our house.

"And as we helped the old country doctor into his gig, we noticed not that the step was broken, or the horse stiff in the knees, and we all realized for the first time in our life what doctors were worth. Encourage them. They deserve every kindness at our hands."

He—"What is the difference between the admission to a dime museum and the admission to Sing Sing?"

She—"Don't know. What?"

He—"One is ten cents and the other is sentence. See?"—*Truth.*

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

THERAPEUTICS.

The Utility of Saline Enemata in Hemorrhage.

Dr. Warman refers to recent improvements in the treatment of patients bleeding to death, and more particularly to the beneficial results of saline enemata. The author enumerates the objections to the intravenous and subcutaneous methods, the principal difficulties in the former being the impracticability and the danger in the use of an excessive quantity, and in the latter the slow absorption of the injected fluid. Being unable to use either method in a case of abortion, the author attempted a rectal injection, which was very successful. Subsequent he treated twenty-eight patients it the same way, most of whom when seen were much collapsed from post-partum inability of the sphincter to retain the solution. This the author overcomes by placing the patient on one side, allowing the solution to flow slowly and then pressing on the cannula through the vagina. In severe cases this trouble was least frequent, as in these he found absorption to take place most rapidly. The author recommends the same treatment in all severe hemorrhages, excepting those from the intestine.—*Therapeutische Monatshefte.*

The Local Use of Guaiacol.

Apropos of an article by Bard on the antithermic properties of guaiacol locally applied, and of which an abstract was published in the *Gazette* for August last, M. Lannois (*Lyon Medical*), published a contribution on the same subject, mainly corroborative of Bard's observations. Lannois, having tried the method in three patients, concludes:

1. Guaiacol locally applied diminishes to a considerable extent the abnormal temperature or tuberculous patients.
2. The absorption of the drug occurs most probably in the skin, and not by the passage of the guaiacol vapors through the lungs.
3. The absorption of the medicament by the mucous membrane of the rectum gives rise to the same reduction of the temperature as when the drug is applied to the skin; this same action has been observed also in the case of creosote.

MEDICINE.

Chlorobrom in Sea Sickness.

Dr. Arthur Hutcheson, writing to *The Lancet*, says that he used chloroform in all cases of sea sickness to which he was called while ship's surgeon on a voyage to and from New Zealand. He always gave it in three-drachm doses in the second stage of this distressing ailment, when retching, headache, depression, and sleeplessness were the prominent symptoms, the hour selected for administration being 10 P. M., in order to secure a good night's rest. The results were very satisfactory. The chlorobrom was always retained and was always followed by sleep (generally sound). The patient awoke much refreshed in the morning, with an appetite and able (except on one occasion) to eat and retain something light.

In Eczema

There are three groups of sequences: 1. Unknown primary changes in the cells. 2. Arrangements to dispose of the adventitious matter from the blood. 3. Altered chemical action in the epithelium—which sequences have certain forms which appear on the surface of the skin, as redness, swelling, papules, vesicles, etc., and desquamation of cells. In the management of eczema three objects are to be specially aimed at: 1. To sterilize the skin. 2. To aid the removal of the adventitious fluid and cells. 3. To help the formation of the new horny cuticle, and to protect the skin during, and for some time after, its formation.—*Ex.*

The Relation of Syphilis to General Paresis.

Dr. Frederick Peterson states that his study of this subject leads him to submit the following brief conclusions:

1. A history of syphilis is found in sixty to seventy per cent. of cases of general paralysis of the insane.
2. The fact must not be lost sight of that in thirity to forty per cent. of these cases no history of syphilis, congential or acquired, is to be found.
3. Antecedent syphilis is seven to ten times more frequent in general paralysis than in other forms of insanity.
4. Syphilis is therefore to be looked upon as a frequent but not constant factor in its production.
5. But paralytic dementia is not a form of specific disease, not a late syphilitic manifestation, nor is it a form of degeneration dedepending upon the syphilitic poison for its origin.
6. The relationship of syphilis to general paresis lies in the facts that it is a wide spread disorder in all communities, that it weakens the constitution and vitates the blood in many whom it infects, and that the system is thus prepared in many cases for the direct operation of the final etiology factors of general paresis, viz., alcoholism, excessive venery, heredity, and mental overstrain and excitement.

The Sedative Action of Duboisine in the Insane.

The following conclusions are based upon an extensive experience of this drug, given in continued doses of from 2 to 4 milligrammes:

1. Duboisine reveals itself as a marvellous sedative, capable of combating, always and in all cases, maniacal and melancholic agitation, often substituting an absolute tranquility for the most violent excitement or anxiety; its action presents itself in two degrees, the one incomplete, consisting of a simple attenuation of the exaltation, the other complete, and characterized by the total disappearance of the latter for a time more or less long.

2. The calm induced does not attain its maximum all at once; sometimes this does not occur till the second or third day.

3. Once produced, the calm is maintained very regularly so long as habituation does not manifest itself.

4. The more complete sedative action most often persists one or several days after stoppage of the drug, and often it happens that the calm is prolonged over a fairly long period.

5. In the intermittent and remittent forms of insanity, it is capable of reducing the duration of the attacks and of spacing them out.

6. The sedative action in all its degrees has been in general, particularly in the first days of treatment, in inverse proportion to the length of time that has elapsed since the administration of the remedy; hence the advantage of giving the drug in two doses daily.

7. The complete action occurs much more frequently in chronic than in acute mania, and, on the contrary, in acute than in chronic melancholia, and in a general way, in mania than in melancholia.

8. In general paralysis the complete action is less frequent than in chronic mania and acute melancholia, but more frequent than in acute mania and chronic melancholia, but, on the whole, general paralysis shows itself more sensible to the influence of the drug than the insanities.

9. Habituation occurs very promptly in the insane, is established very suddenly, and is not overcome by increasing the dose.

10. Tolerance is more frequent and more rapid in general paralysis, is more frequent in melancholia than in mania, and does not appear in the chronic forms of insanity.

11. The incomplete action is less frequent in general paralysis than in other forms of insanity.

12. In a general way it may be said that the drug is more active in general paralysis than in the insanities, in mania than in melancholia, in chronic than in acute mania, and in acute than in chronic melancholia.

13. Owing to its action on the stomach, it is well to administer the drug at times the most removed from the two principal meals.

14. It has, unfortunately, a very damaging effect upon the general nutrition, particularly when long continued.—*Glasgow Med. Jour.*

Treatment of Myxœdema and Cretinism with the Thyroid Gland.

In this paper 100 published cases of myxœdema and 11 of cretinism are reviewed. The treatment by thyroid gland is found to give equally favorable results in both sexes and at all ages. The length of time which the disease has existed makes little or no difference in the treatment. In some cases the improvement occurs with extraordinary rapidity, and the changes brought about in one month or eight weeks are always well marked; but the length of time during which it may be necessary to continue the treatment is a point as yet unknown. Probably it may be necessary to continually give a small dose at more or less prolonged intervals in order to maintain the improved condition. As regards dosage there has been no uniformity, so much depends on the age of the individual, and stage of the malady, and personal idiosyncrasy. The occurence of grave and unpleasant symptoms is noted, attributable mainly to excessive dosage and consequent toxic action, and varying from general weakness, faintness, nausea, vomiting, giddiness, headache, and aching pains in the neck and shoulders, to loss of consciousness, tonic spasms, collapse, urgent dyspnœa, and cardiac failure, while in four cases death resulted.—*Glasgow Med. Jour.*

Multiple Chancres with Fever Treated by Warm Baths.

An anæmic young man, who had a soft sore on the scrotum and a suppurating bubo in the groin, suffered much from itching in the legs, and scratched himself freely; the consequence was the sudden eruption of some 30 chancres on the lower limbs. This was associated with well marked fever, which continued for a week, although the ulcers were daily cleansed with corrosive sublimate solution, and dressed with iodoform. While these sores were in process of healing, a second and more abundant eruption took place over the limbs, buttocks and loins, again accompanied by high fever. and by prostration. Warm baths were employed daily, the temperature being gradually raised, by the addition of hot-water, from 30° to 36° C. The temperature soon went down, and the patient recovered, the ulcers healing in three weeks.

Experimental inoculation of pus from the sores was successfully carried out three times on the patient himself. Culture experiments made from the blood yielded negative results. The fever was looked upon a simple absorption fever.—*Ex.*

SURGERY.

Cyst of Pancreas.

Dr. Giffen (Nebraska) reports the case of a woman, aged 28, suffering from abdominal tumor, with severe pain for two years, and nausea after food. The abdomen was opened, and the tumor found to be a pancreatic cyst. After evacuating three quarts of the fluid, the cyst wall was shelled out down to the body of the pancreas, pulled out and attached by suture to the abdominal wall, as much as possible being cut off, and the rest packed with iodoform gauze. The patient did well; there was slight suppuration, but the wound healed rapidly, except where the cyst wall was attached, where a fistula remained a few weeks.—*Medical News.*

A New Method of Direct Fixation of Fragments in Compound and Ununited Fractures.

Senn (*International Jour. Surg.*) makes an earnest plea in favor of more frequent recourse to direct means of fixation in compound and ununited fractures.

His conclusions are as follows:

1. Direct fixation of the fragments is indicated in all compound fractures in which perfect retention cannot be secured by simpler measures and in the treatment of ununited fractures requiring operative interference.
2. This method is also justifiable in certain forms of subcuteneous fracture in which reduction and retention cannot be accomplished without it.
3. Free exposure of the fragments in compound fractures secures the most favorable condition for thorough disinfection.
4. Perfect reduction and direct fixation of the fragments are the most reliable prophylactic measures against delayed union, nonunion; and deformity.
5. A compound fracture should be regarded in the same light as an injury to the soft parts, and should be treated upon the same principles.
6. Bone sutures and ivory nails do not furnish the necessary degree of support and immobilization in the direct treatment of fracture.
7. The hollow perforated bone or ivory cylinder devised by the author answers the same mechanical purpose without the objections which have been charged against the solid cylinder. Such cylinders should be made from the shafts of long bones of young animals, such as chickens, turkeys, or rabbits.
8. Fractures not requiring drainage should be closed with buried and superficial sutures.
9. The external splint should be so applied as not to require changing during the entire course of the treatment.

A New Treatment of Mammary Abscess.

Tweedy (*Medical Press and Circular* adopts Weber's method of treating mammary abscess.

An early and free incision is made in the breast, radiating from the nipple, and situated at the most dependent part of the abscess.

The finger is then inserted into the wound and the gland structure broken down. This manipulation, it is stated, will have no bad effect on the healthy tissue.

By this process several new cavities will be found, and these, in turn, are to be opened by an incision smiliar to the first, and the whole thoroughly douched with some antiseptic solution.

The membrane lining the several cavities is to be curetted, and the *debris* removed by a second douching.

Strips of gauze sufficient to fill every interstice of the abscess are to be steeped in a one-per-cent. solution of carbolic acid, and inserted by means of a long sinus forceps and probe. A large, flat sponge is then placed on the breast and tighly bandaged thereto for twenty-four hours. After this period the dressings are removed, and without further irrigation the cavities are again packed, the sponge and bandage being reapplied as befor.

On the third day process is repeated.

In the fourth dressing the gauze packing is dispensed with and the incisions are drawn together and dressed antiseptically; the sponge and bandage are reapplied.

This last process is repeated every twenty-four hours until healing is complete; this usually takes place about the tenth day. In one of the author's cases the whole process was accomplished without the aid of anæsthesia. In only one of his cases was it necesaary to make a second incision. The incisions are never longer than is necessary to admit a finger.

Iodoform gauze should be used for packing the wounds.

The author only having treated five cases, cannot say definitely what portion of the above treatment is essential, but he is strongly inclined to the opinion that curetting can be safely dispensed with.—*Therap. Gaz.*

GYNECOLOGY.

Operations upon the Uterine Appendages With a View to Preserving the Functions of Menstruation and Ovulation.

Polk (*American Jour. of Obstetrics,*) in reading his paper with the above title before the American Gynecological Society, at its session held in Philadelphia, May 16, 17, and 18, 1893, reaches the following conclusions:

1. In case of chronic disease of the appendages the incisions should be in the nature of "exploratory incisions."
2. The question of removal should be in the main left for determination after the organs have been exposed.
3. That the condition of the ovary should be the chief factor in determining the question of procedure.
4. That, if need be, this may be determined by exploratory incision of the ovary or puncture.
5. That if the ovary contains pus, it and the associated tube should be removed, it being the rule that whenever an ovary is removed the tube must accompany it.
6. That if the tube contains pus, the ovary being free from pus or dissemiated cystic degeneration, the operator is at liberty to recommend either the removal of both organs or else the partial amputation of the tube

leaving the ovary; and that the same rule shall apply in cases of hydrosalpinx and hæmatosalpinx.

7. That cyst of the ovary do not indicate removal, provided they are not general thoroughout the organ and can be enucleated —hæmatoma of the ovary a possible exception.

8. Tubes with open infundibula, even though adherent and affected with parenchymatous inflammation and endosalpingitis do not demand removal, excepting when one opens into a pus cavity.

9. A tube whose outer end is closed may be opened cleansed, and its inner and outer coats coaptated, and then be returned to the abdominal cavity, provided it does not contain pus and possibly old blood.

10. Adhesions do not demand the removal of the tubes and ovaries, unless they be so dense that in breaking them the appendages are seriously injured. This presupposes that the appendages in themselves are not sufficiently diseased to demand removal.

OBSTETRICS.

Unconscious Delivery.

Le Blond (*Journ. de Med. de Paris*) related in July a remarkable case before the Medicolegal Society of Paris. A woman, aged twenty-seven, who had been seduced and deserted, was seized with slight colicky pains, but continued to work. In the course of the following night she was attacked with still more severe pain. Thinking that an action of the bowels would give relief, she sat upon her chamber utensil; on straining a live child was born. This alarmed her greatly, but she cut the cord with scissors, wrapped the infant in a cloth and walked downstairs, telling the people in the house, in fear and trembling, what had happened. Violent flooding set in. The cord had not been tied. Early in the morning Le Bond saw the patient, and found the placenta still in the vagina. He extracted it. The mother and child did very well. Had the child died the mother would have been very strongly suspected of murder, especially if she had attempted to defæcate in a public privy, in which case the child would almost inevitably have been killed.—*British Medical Journal.*

ARMY AND NAVY.

U. S. ARMY, FROM DECEMBER 17, 1893, TO DECEMBER 23, 1893.

Lieut. John S. Kulp, Assistant Surgeon, U. S. Army, is relieved from further duty at Jackson Park, Chicago, Illinois, from December 23, 1893.

Leave of absence for one month, to commence about December 22, 1893, is hereby granted to Major Daniel G. Caldwell, Surgeon, U. S. Army.

Leave of absence for one month, to take effect about the 20th instant, is granted Captain W. B. Banister, Assistant Surgeon, U. S. Army.

Bailhache, P. H., Surgeon; Granted leave of absence for five days, Nov. 28, 1893. To inspect quarantine ports Dec. 7, 1893.

Purviance, George, Surgeon; to inspect quarantine ports Dec. 7, 1893.

Saweelle, H. W., Surgeon; to inspect quarantine ports Dec. 7, 1893. Granted leave of absence for three days, Dec. 4, 1893.

Austin, H. W., Surgeon; detailed as chairman board, to amend and revise the quarantine regulations, Dec. 9, 1893.

Gassaway, J. M., Surgeon; to proceed to Mobile, Ala., as inspector, Nov. 22, 1893. To inspect quarantine ports Dec. 7, 1893.

Mead, F. W., Surgeon; detailed as chairman board to examine candidates, Revenue Marine Service, Dec. 9, 1893.

Carter, H. R., Surgeon; to proceed to Brunswick, Ga., for temporary duty Nov. 29, 1893. To inspect quarantine ports Dec. 7, 1893. Detailed as member board to revise and amend the quarantine regulations, Dec. 9, 1893.

Wheeler, W. A., Surgeon; detailed as member board to revise and amend quarantine regulations Dec. 9, 1893.

Banks, C. E., Passed Asst. Surgeon; granted leave of absence for seven days, Nov. 22, 1893.

Carmichael, D. A., P. A. Surg.; to inspect quarantine ports, Dec. 7, 1893.

White, J. N., P. A. Surgeon; to proceed to Savannah, Ga. for duty Dec. 4, 1893. Detailed as member board to revise and amend the quarantine regulations, Dec. 9, 1893.

Carrington, P. M., P. A. Surgeon; to proceed to Baltimore, Md. for duty Dec. 9, 1893.

Williams, L. L., P. A. Surgeon; to proceed to Charleston, S. C. for duty Dec. 4, 1893.

Pettus, W. J., P. A. Surgeon; granted leave of absence for eleven days. To proceed to Buffalo, N. Y. for duty Dec. 4, 1893.

Keinyoun, J. J., P. A. Surgeon; to rejoin station.

Washington, D. C., Nov. 24, 1893. Granted leave of absence for three days, Dec. 4, 1893. Detailed as Recorder Board to revise and amend quarantine regulations, Dec. 9, 1893.

Woodward, R. M., P. A. Surgeon; granted leave of absence for seven days. To proceed to Cairo, Ill. for duty Dec. 4, 1893.

Voughan, G. T., P. A. Surgeon; detailed as Recorder Board for physical examination candidates Revenue Marine Service, Dec. 9, 1893.

Cobb, J. O., P. A. Surgeon; to inspect quarantine ports Dec. 7, 1893.

Guitevas, G. M., P. A. Surgeon; to report at Bureau for temporary duty Dec. 6, 1893.

Geddings, H. D., P. A. Surgeon; to proceed to New York, N. Y., for duty Dec. 2, 1893.

Young, G. B., Asst. Surgeon; to proceed to New York, N. Y., for duty, Dec. 4, 1893.

Stimpson, W. G., Asst. Surgeon; to proceed to Detroit, Mich., Dec. 4, 1893.

Brown, B. W., Asst. Surg.; granted leave of absence for seven days. To proceed to Washington, D. C., Dec. 4, 1893.

Houghton, E. R., Asst. Surgeon; To proceed to Vineyard Haven, Mass., for duty, Dec. 4, 1893.

Roseman, M. J., Asst. Surgeon; to proceed to St. Louis, Mo., for duty, Dec. 4, 1893.

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